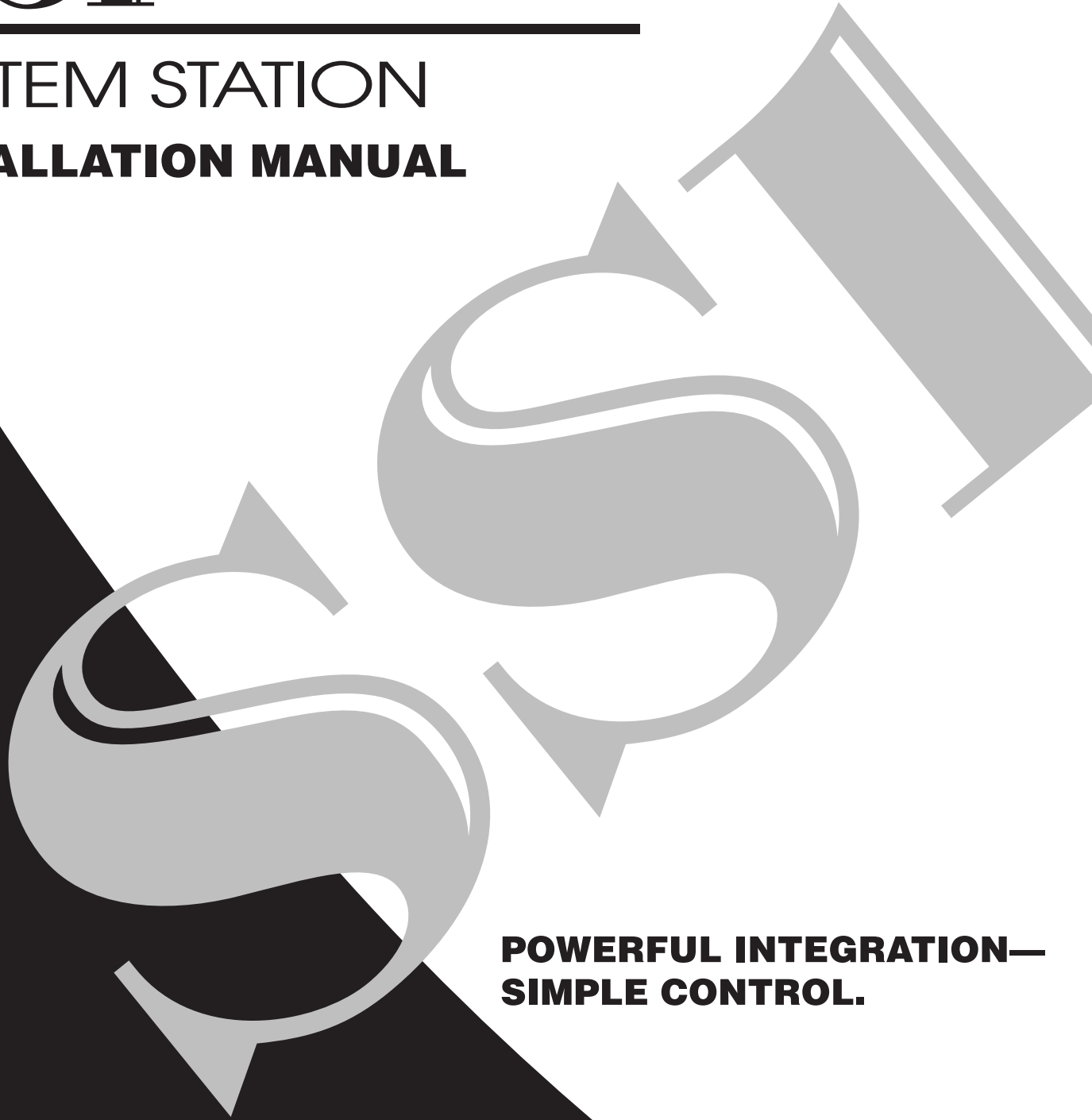


SS1

SYSTEM STATION INSTALLATION MANUAL



**POWERFUL INTEGRATION—
SIMPLE CONTROL.**



Safety Information



RISK OF ELECTRIC SHOCK DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

**WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**



IMPORTANT SAFETY INFORMATION

Read Information—All the safety and operating information should be read before the appliance is operated.

Follow Information—All operating and use information should be followed.

Retain Information—The safety and operating information should be retained for future reference.

Heed Warnings—All warnings on the appliance and in the operating instructions should be heeded.

Wall Mounting—Mounting of this appliance should be done only by an authorized installer.

Ventilation—The appliances should be situated so that their location or position does not interfere with their proper ventilation. These appliances should never be placed near or over a radiator or heat register. These appliances should not be placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

Non-Use Periods—Appliances that are left unattended and unused for long periods of time should be de-energized.

Grounding or Polarization—Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one blade wider than the other blade. A grounding type plug has two blades and a third grounding prong. The polarized wide blade and the third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Water—Do not use the device near water.



Power Cord Protection—Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.

Cleaning—Unplug the apparatus from the power outlet before cleaning. Use only a dry cloth to clean the apparatus.

Power Lines—An outdoor antenna should be located away from power lines. When installing an outside antenna system, extreme care should be taken to avoid touching power lines or circuits, as contact with them may be fatal.

Overloading—Do not overload wall outlets and extension cords, as this could result in fire or electric shock.

Object and Liquid Entry—Never insert objects of any kind through the openings of these appliances, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Care should be taken so that objects do not fall and liquids are not spilled into the appliance through openings in the enclosure.

Servicing—Do not attempt to service these appliances yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service—These appliances should be serviced by qualified service personnel when:

- A power supply connection or a plug has been damaged or
- If liquid has been spilled into the appliance or objects have fallen into the appliance or
- The appliance has been exposed to water or moisture or
- The appliance does not appear to operate normally or exhibits a marked change in performance or
- The appliance has been dropped or the enclosure damaged.

Replacement Parts—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards. The battery should be replaced only after turning the power off and only by an authorized installer.

Safety Check—Upon completion of any service or repairs to this audio product, ask the service technician to perform safety checks to determine that the audio product is in proper operating condition.

Lightning Storms—Unplug this apparatus during lightning storms or when unused for long periods of time.

Attachments and Accessories—Use only attachments/accessories specified by the manufacturer.

Cart, Stand, Tripod, Bracket or Table—Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.

Disconnect Device—Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain operable.



NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by Elan Home Systems could void the user's authority to operate the equipment.

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1. Introduction

The SS1 System Station is an RS-232, IR, Sense and Relay controller all rolled into one. It is also the companion component to the VIA!2-8.4 Wireless Touch Panel, translating the wireless panel's 802.11g WiFi commands into actions that can control just about every aspect of a Home Theater or a zone in an ELAN multi-room system. Configuration options include:

- **STAND-ALONE**-Connection Hub for VIA!2-8.4 Wireless Touch Panels in Stand-Alone/Home Theater applications
- **ZONE**-Connection Hub for VIA!2-8.4 Wireless Touch Panels when used as a controller for a zone in an ELAN Multi-Room Controller-based system
- **SYSTEM**-System Controller when connected to wired VIA! Touch Panels, Olé Touchpads and ZONE VIA!2-8.4/SS1 Connection Hubs

Featuring ELAN's most flexible IR engine to date, the SS1 System Station has 12 fully-steerable IR output ports that can be programmed with conditional statements and combined with 64 triggerable sequences to create the ultimate in reliable IR system control. Six Sense inputs allow for the connection of ELAN[®]SENSE Audio, Video, Current, Doorbell, Voltage, Light, and Contact-Closure sensors for reliable power management and automation features. Eight configurable Relay outputs, which can be activated using IR/RS-232 commands or Sense Input triggers, can be used to automate home theater screens, lifts, drapes, lighting, and more.

The SS1 System Station has Four Serial Ports for the integration of local and system RS-232-controlled sub-systems and components (i.e. lighting, temperature, security), allowing wired VIA! Touch Panels, Wireless VIA!2-8.4 Touch Panels, and Olé Touchpads to control these systems. An Ethernet port is provided for interaction with network devices such as the VIA!2-8.4 Wireless Touch Panel and the VIA![®]dvdj DVD Controller. Independent LED activity indicators for all four COM Ports, the Ethernet port, and the Host/ELAN ports make for easy setup and troubleshooting.

Future software/feature-set enhancements to the SS1 System Station are field-upgradeable through VIA![®]TOOLS downloads.

Features

- **Wireless VIA!2-8.4 Wireless Touch Panel Connection Hub**
- **802.11g Internet Protocol Translator**
- **RS-232 Controller for Home Automation**
- **Five RS-232 COM Ports**
- **Six Sense Inputs**
- **Eight Programmable Relay Outputs**
- **Twelve Programmable IR Outputs**
- **Advanced Conditional Statement IR Engine**
- **IR 'ALL' Port**
- **External IR Input**
- **Ethernet Port for Control of Networked Devices**
- **Upgradeable**

Specifications

Power

Power Requirements 12VDC @ 230mA Nominal
Recommended Power Supply ELAN 1.2A

Relays (X8)

Type NO/NC Closed Contact Relay
Maximum Rated Load 1A @ 24VDC
DC Relay Power 30VDC @ 1.2A Capacity

Ethernet TIA-568A Standard RJ-45 10 BaseT

Sense Inputs (X6)

Type Closed-Contact
Connector 3.5mm Stereo Jack
Power 5VDC

IR Outputs (X12)/IR Input

Outputs 1-12 100mA
ALL IR Output 100mA
EXT IR Input 12VDC Active High

COM Ports (X4)

Type RS-232 DB-9 Connectors
COM 1-4 110-115.2K Baud

HOST/ELAN RS-232 Ports

Type RS-232 DB-9 Connectors
Host/ELAN 110-115.2K Baud

IR Link DB-15 Connector

VIA! Net ELAN Standard RJ-45

Release Notes

- One SS1 System Station is required for each VIA!2-8.4 Wireless Touch Panel
- A dedicated network and wireless access point (WAP) is recommended for the VIA!2-8.4

SS1 Rear Panel

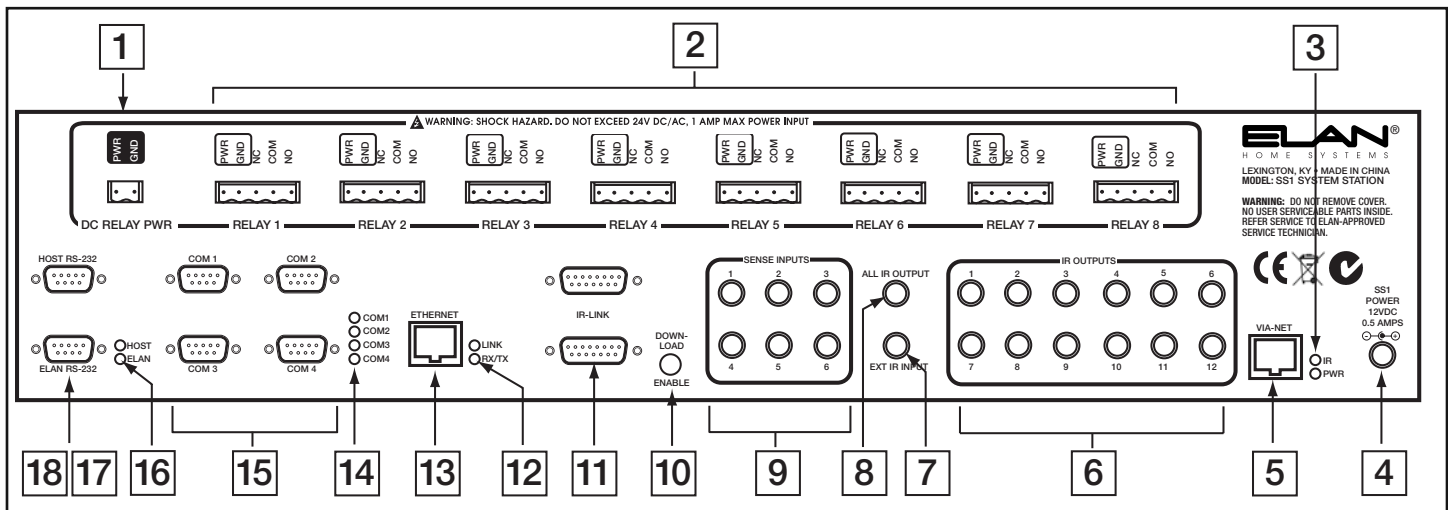


Figure 1.1 - SS1 Rear Panel

- | | |
|---|---|
| <p>1 DC Relay Power
Connect a 1-30V AC or DC power supply for relay applications requiring power.</p> <p>2 Relay 1-8
Connect a Normally Open (NO) or Normally Closed (NC) Relay.</p> <p>3 Power/IR Activity LEDs
Indicates power status and IR activity.</p> <p>4 12VDC Power Port
Connect the included 12VDC power supply.</p> <p>5 VIA!NET Port
Provides a link to VIA! NET devices such as the VIA!SC4, or additional SS1. Uses ELAN Standard RJ-45 pinout.</p> <p>6 IR Outputs
Connect up to 12 single or dual IR emitters such as ELAN IRE1, IRE1D, IRE2, IRE2D, or IRE4 IR Emitters. These outputs are programmable using VIA!TOOLS setup software.</p> <p>7 EXT IR Input
Add a non-system IR receiver or keypad for additional control options.</p> <p>8 ALL IR Output
The sum of Outputs 1-12 is sent out the ALL port. Connect IR emitters or IR distribution blocks such as the ELAN IRD4 Amplified Connection Block.</p> <p>9 Sense Inputs
Connect ELANSENSE Sensors to create Triggers for automated events. Use VIA!TOOLS to program sequences that control RS-232 or IR devices.</p> | <p>10 Download Enable Button
Press to enable VIA!TOOLS download.</p> <p>11 IR Link
DB-15 cable connects to ELAN Multi-Room Controllers or additional SS1 System Stations.</p> <p>12 Ethernet Activity LEDs
Indicates Ethernet Link and Receive/Transmit status.</p> <p>13 Ethernet Port
Connect a Cat-5 cable with TIA568A Standard RJ-45 terminator. Allows interaction with networked devices such as the VIA!2-8.4 Wireless Touch Panel.</p> <p>14 COM Port Activity LEDs
Indicates COM port activity status.</p> <p>15 COM Ports 1-4
Connect RS-232 controlled devices such as Lighting, Security, and HVAC from VIP Partners.</p> <p>16 COM Port Activity LEDs
Indicates COM port activity status.</p> <p>17 Host RS-232 Port
Used to download from VIA!TOOLS when in SYSTEM mode.</p> <p>18 ELAN RS-232 Port
Connect to ELAN 1-way RS-232 devices.</p> |
|---|---|

2. System Design & Applications

The first step to a good design is to map the system. It is advisable to mark up a copy of the house floor plan with speaker, keypad, touch panel, touchpad, volume control, and equipment locations, etc. Make sure that all locations are decided upon before pre-wiring commences so that all necessary wiring and installation hardware is in place. This unit will be interfacing with other components such as relay-controlled devices, source components, sensors, serial controllers, and user interfaces, so it is essential that ALL system components are accounted for prior to the pre-wire stage.

Secondly, make a detailed list of all components. Include source equipment, touch panels, touchpads, keypads, RS-232 controlled devices, relay controlled devices, power supplies, sensors, and the SS1 System Station itself. Be sure to include necessary electrical boxes, structured wiring enclosures, telephone lines, rough-in brackets, ELAN Precision Panels, patch cables, etc.

Pre-Wire

Pre-wiring for the SS1 System Station requires careful system planning. Pay close attention to where each component will be located and ensure that the appropriate wires are run to the correct locations! Make sure to plan for the future. It is often advantageous to pre-wire for components that may be installed later.

VIA!2 Wireless Touchpanels

The VIA!2-8.4 Wireless Touch Panel's Base Station will require access to 110 VAC. Make sure to locate the Base Station within range of a Wireless Access Point.

Wireless Access Points

Wireless Access Points (WAPs) take information originating from wireless VIA! Touch Panels and send it to the system's router. Keep in mind that local conditions and different WAP ranges will make each installation different. Test the range before finalizing the installation locations of WAPs. Use Cat-5 cable to connect the WAP to the router.

Router

A Router (wired or wireless) is the heart of the VIA!28.4's communication system. Location of a wired router is not critical, as long as access is provided for connections and service. A wireless router must be located where it's signal can reach the WAP and other wireless devices on the network. A router will typically share duties between the wireless touch panels, VIA!dj Digital Music Servers, VIA!dvdj DVD Controllers, and any computers in the customer's home. Use Cat-5 cable to connect the Router to the SS1 System Station.

Relay Controlled Devices

The SS1 System Station's eight closed-contact relays can be used to control devices such as lifts, projection screens, and drapes. Use two-conductor stranded cable between the SS1 System Station's RELAY terminals and the devices to be controlled.

RS-232 Controlled Devices

RS-232 communication is accomplished by loading drivers directly into the SS1 System Station from VIA!TOOLS Setup Software. Connect serial cables or Cat-5 (w/ DB-9 connectors) between the COM1-4 ports on the SS1 and the RS-232 device's COM ports. COM1 and COM2 have Transmit/Receive reversed compared to COM3 and COM4. Make sure to use the correct ports for the correct RS-232 controlled devices! VIA!TOOLS setup software will help to determine which device should be assigned to a particular COM port.

IR Controlled Devices

IR controlled devices should typically be installed in close proximity to the SS1 System Station. Connect single and dual IR emitters between the IR ports of the SS1 and the IR sensor window (or 3.5mm IR input jack) of the source to be controlled. Use VIA!TOOLS setup software to create IR control functions and independent IR routing.

Sensors

ELANSENSE sensors can be used to trigger automated functions using the SS1 System Station. Sensors plug into the Sense Inputs using stereo 3.5mm plugs. Use Cat-5 to extend the length of the sensor's wires, if necessary. Use VIA!TOOLS setup software to create triggered events using sensors.

Zone/System Wire Run Specifications and VIA!NET Overview

The communication link between a Zone or System SS1 and all the wired or wireless VIA! Touch Panels and Olé Touchpads in a system is called the 'VIA!NET'. All VIA!NET wire runs are "home-run" from each VIA!/Olé location to a PVIA 1, PVIA4, PVIA10 or PS12 Precision Panel (as well as any future Precision Panels), which serve as the network hub. There are two types of VIA!NETs: BASIC and EXTENDED.

BASIC VIA!NET

A BASIC VIA!NET has the following specifications and limitations:

- Capable of supporting one System SS1 and a maximum of 30 wired VIA! Touch Panels, wireless VIA!2 Touch Panels (with their companion Zone SS1s) and/or Olé Touchpads.
- The maximum distance between an SS1 and any one wired VIA! Touch Panel companion Zone SS1 or Olé Touchpad CANNOT EXCEED 1000 feet.
- In a BASIC VIA!NET system, the combined TOTAL LENGTH of the wire runs CANNOT EXCEED 2000 feet.

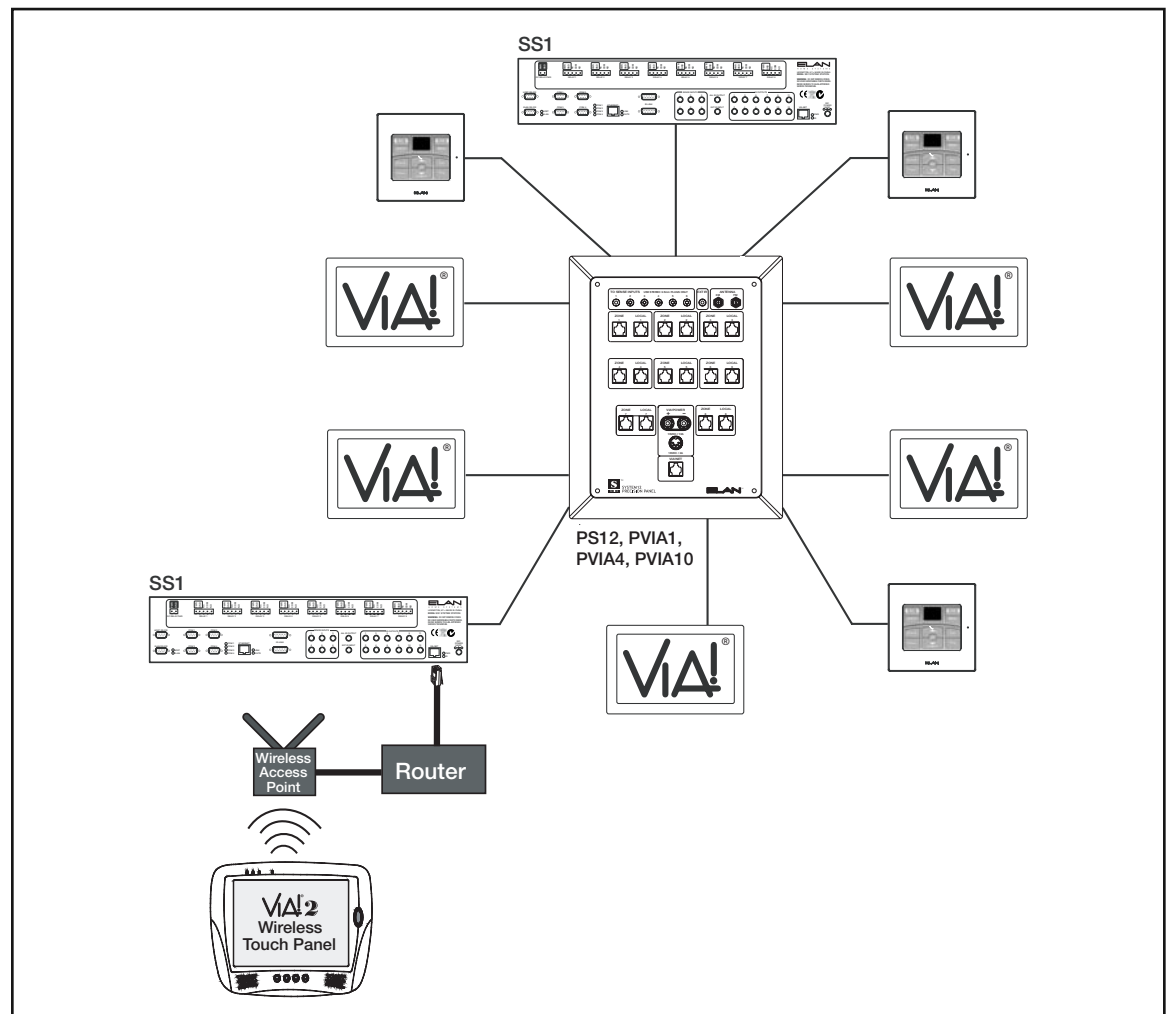


Figure 2.1 - Basic VIA!NET

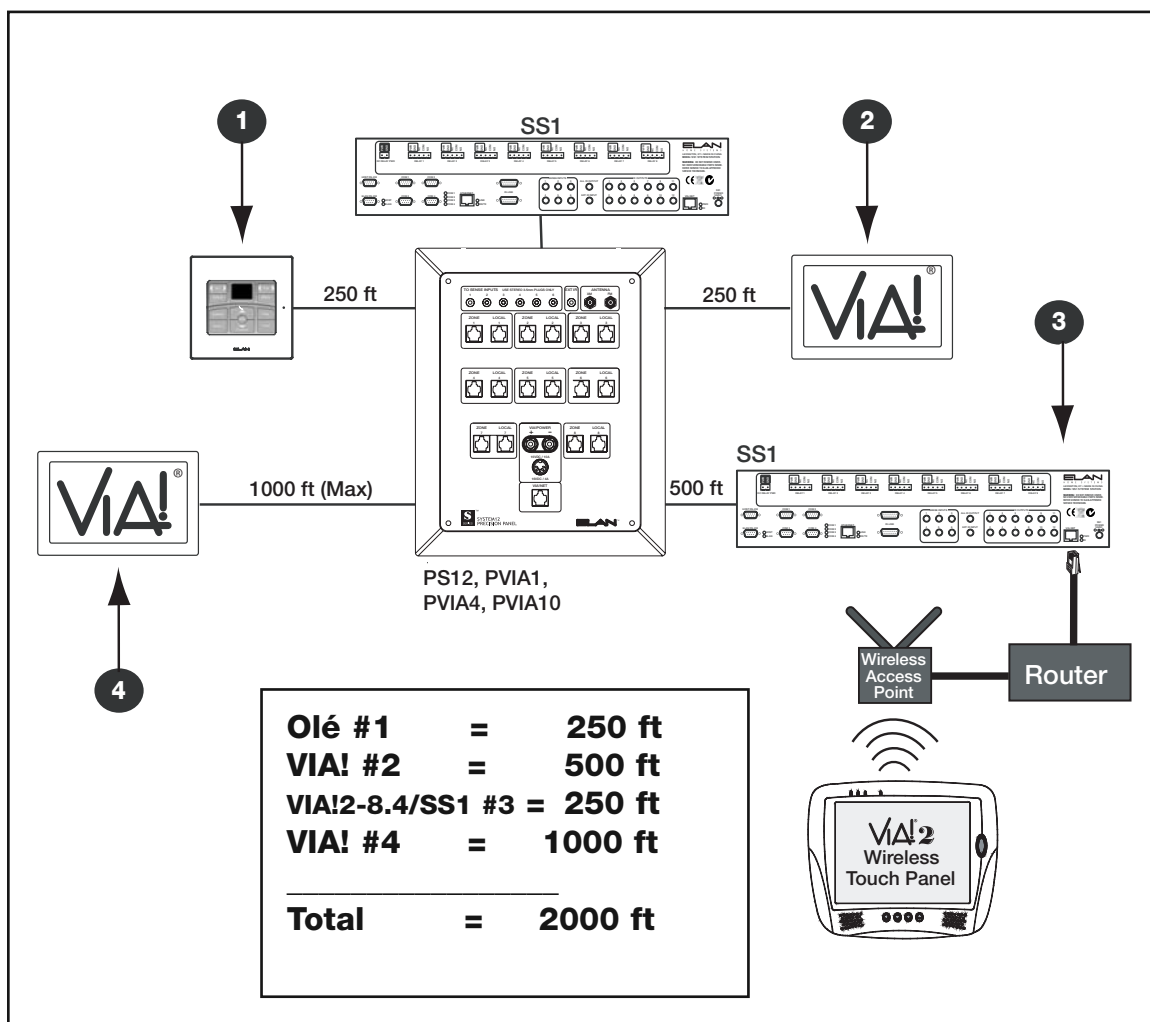


Figure 2.2 - BASIC VIA!NET Wire Run Lengths

EXTENDED VIA!NET

An EXTENDED VIA!NET has the following specifications and limitations:

- Capable of supporting one System SS1 and a maximum of 30 wired VIA! Touch Panels, wireless VIA!2 Touch Panels (with their companion Zone SS1s) and/or Olé Touchpads (same as BASIC VIA!NET).
- The maximum distance between an SS1 and any one wired VIA! Touch Panel companion Zone SS1 or Olé Touchpad CANNOT EXCEED 1000 feet (same as BASIC VIA!NET).
- In an EXTENDED VIA!NET system, the combined TOTAL LENGTH of the wire runs within the VIA!NET CAN EXCEED 2000 feet.
- Even when VIA!NET Repeaters are utilized, the combined TOTAL LENGTH of wire runs in each “sub-net” still MUST NOT EXCEED 1000 feet.

IMPORTANT! - If the 2000ft total combined wire length (to all the VIA! Panels) is exceeded, an Extended VIA!NET must be created. This is accomplished by breaking the longest VIA!NET wire runs into “sub-nets” using VIA!NET Repeaters. **NOTE:** Using VIA!NET Repeaters does not enable you to extend the maximum distance to any one VIA! Panel (still 1000ft MAX), but VIA!NET Repeaters do enable you to increase the number of VIA! Panels on long runs of wire while ensuring reliable operation of all VIA! Panels in the system.

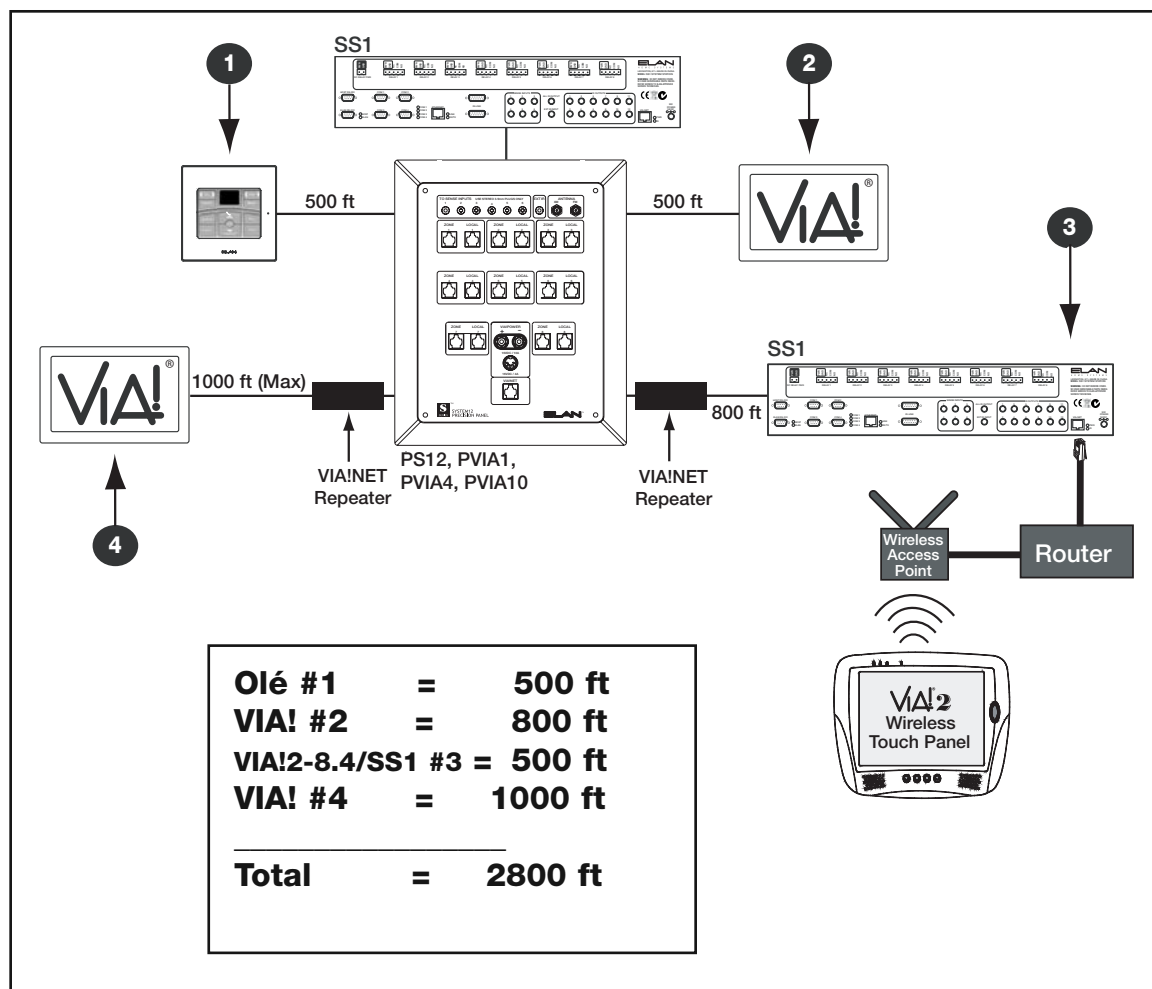


Figure 2.3 - EXTENDED VIA!NET Wire Run Length

VIA!NET Repeaters

VIA!NET Repeaters allow devices to be installed at distances that are in excess of normal maximum wire run lengths. Punch the repeater down on a PVIA or other VIA!NET Precision Panel as shown in the drawing below.

Keep in mind the following points:

- **Use VIA!NET Repeaters when the TOTAL combined wire length to all VIA! Touch Panels exceeds the 2000 ft. maximum limit.**
NOTE: Wire runs WITH VIA!NET Repeaters still must not exceed 1000ft. in length.
- **As many as 30 wire runs WITH VIA!NET Repeaters may be utilized, as long as NONE of the individual runs exceed 1000 ft. in length.**
- **The combined length of all wire runs remaining WITHOUT VIA!NET Repeaters ('sub-net') must not exceed 1000 ft.**

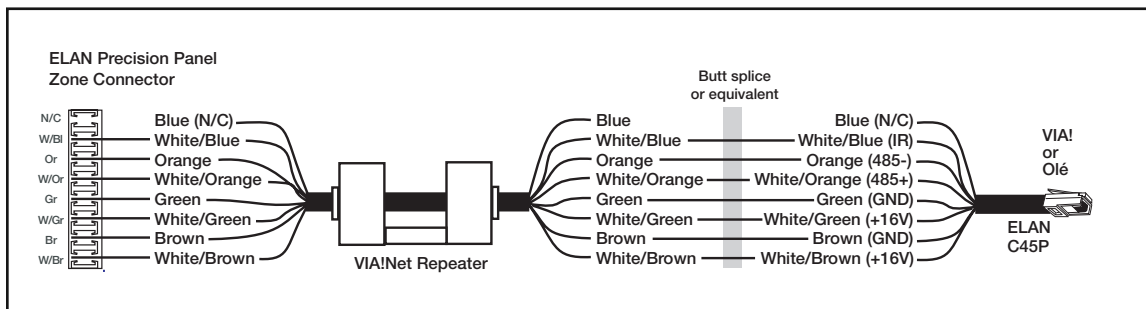


Figure 2.4 - VIA!NET Repeaters

Blue (Pin 1) - System Sense In
 White/Blue (Pin 2) - System IR Out
 Orange (Pin 3) - VIA!Net RS-485 -
 White/Orange (Pin 4) - VIA!Net RS-485 +
 Green (Pin 5) - ZNet 485 -
 White/Green (Pin 6) - ZNet 485 +
 Brown (Pin 7) - N/C
 White/Brown (Pin 8) - N/C

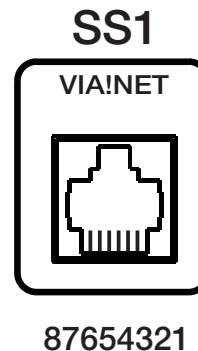


Figure 2.5 - VIA!NET Pinout

System Types

The SS1 has three primary application Types:

- **STAND-ALONE** - Connection Hub for VIA!2-8.4 Wireless Touch Panels in Stand-Alone/Home Theater applications
- **ZONE** - Connection Hub for VIA!2-8.4 Wireless Touch Panels when used as a controller for a zone in an ELAN Multi-Room Controller-based system
- **SYSTEM** - System Controller when connected to wired VIA! Touch Panels, Olé Touchpads and ZONE VIA!2-8.4/SS1 Connection Hubs

STAND-ALONE

STAND-ALONE applications typically use the SS1 as a Control Station/Connection Hub for the VIA!2-SS1 Wireless Touch Panel. These applications can provide IR routing in order to control local IR sources (not part of an ELAN Multi-Room Controller-based system), one-way RS-232 devices that are not part of an ELAN Multi-Room Controller-based system, relay controlled devices, and perform intelligent ON/OFF commands through the Sense Inputs. A Wireless Access Point is used to relay information from a VIA!2-8.4 Wireless Touch Panel to the SS1.

ZONE

ZONE applications consist of a wireless VIA!2-8.4 Touch Panel utilizing the SS1 as a Connection Hub when controlling a zone of an ELAN Multi-Room Controller-based system. ZONE applications can provide IR routing in order to control local IR sources, IR zone control, IR control of system-wide sources, one and two-way control of RS-232 devices, relay device control, and perform intelligent ON/OFF commands through the Sense Inputs. A Wireless Access Point is used to relay information from a VIA!2-8.4 Wireless Touch Panel to the SS1.

SYSTEM

SYSTEM applications are used when an SS1 is performing tasks outside of being the control center for a VIA!2-8.4 Wireless Touch Panel. Often, a System SS1 is linked to an ELAN Multi-Room Controller-based system. These applications can control local IR sources, system-wide IR sources, ELAN Multi-Room Controllers, one and two-way RS-232 devices, relay controlled devices, and perform intelligent ON/OFF commands through the Sense Inputs.

ZONE SS1s (with VIA!2-SS1 Wireless Touch Panels), wired VIA! Touch Panels, Olé Film Interactive Touchpads, keypads, and hand-held remotes can all utilize functions of a System SS1.

STAND-ALONE Applications

VIA!2-8.4 Wireless Home Theater System Control

The SS1 System Station makes an excellent STAND-ALONE Home Theater Controller.

Figure 2.6 shows a STAND-ALONE SS1 System Station providing IR A/V source control, relay control of lifts, screens, and drapes, Ethernet control of a VIA!dvdj, and automated functionality using ELANSENSE Sensors.

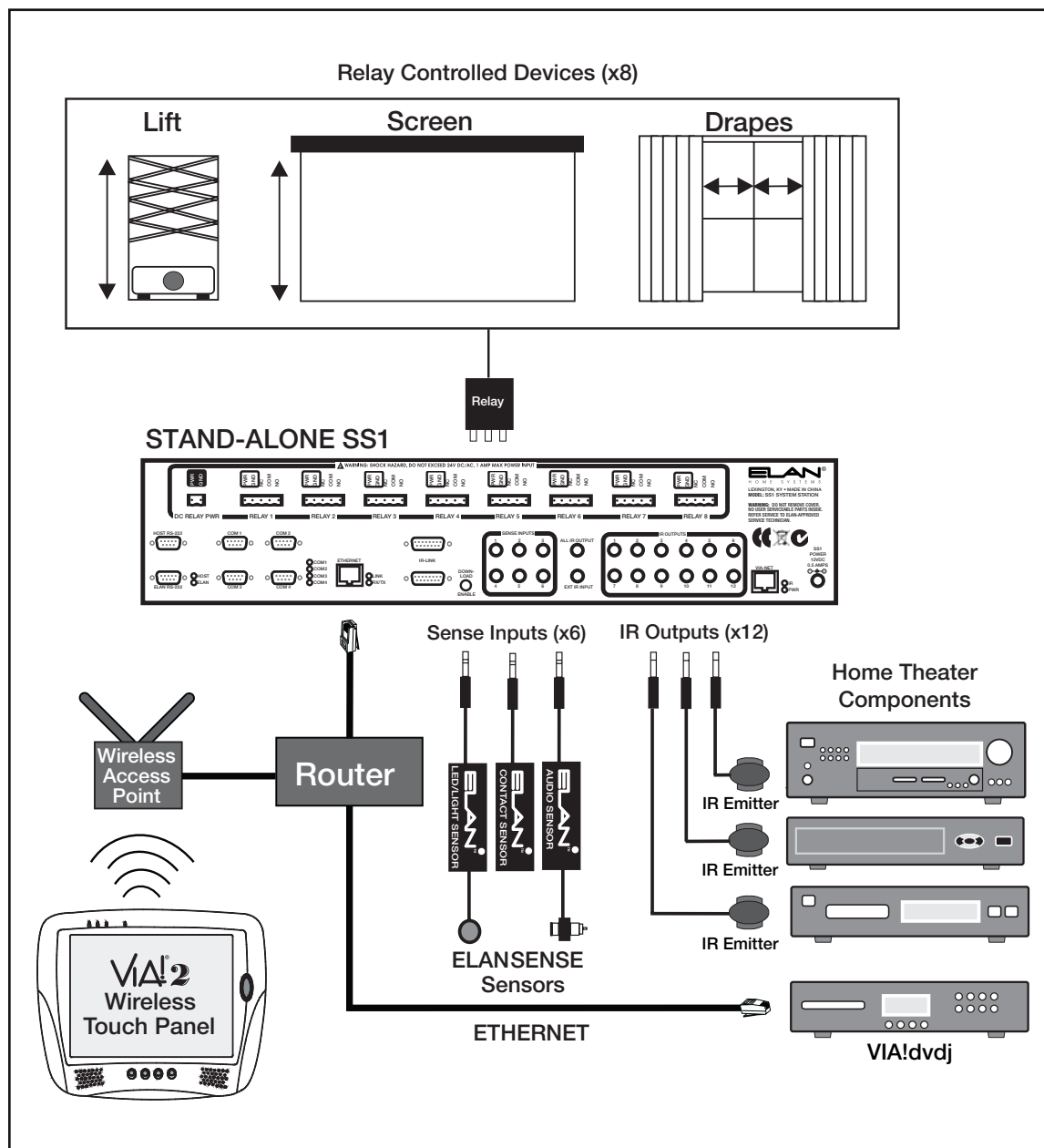


Figure 2.6 - Stand-Alone Home Theater

VIA!2-8.4 Wireless Home Theater System Control w/ One-Way RS-232 Control

Figure 2.7 shows a STAND-ALONE application using the SS1 as a wireless connection hub and providing IR A/V source control, relay control of lifts, screens, and drapes, Ethernet control of a VIA!dvdj, one-way RS-232 control of local systems, and automated functionality using ELANSENSE Sensors.

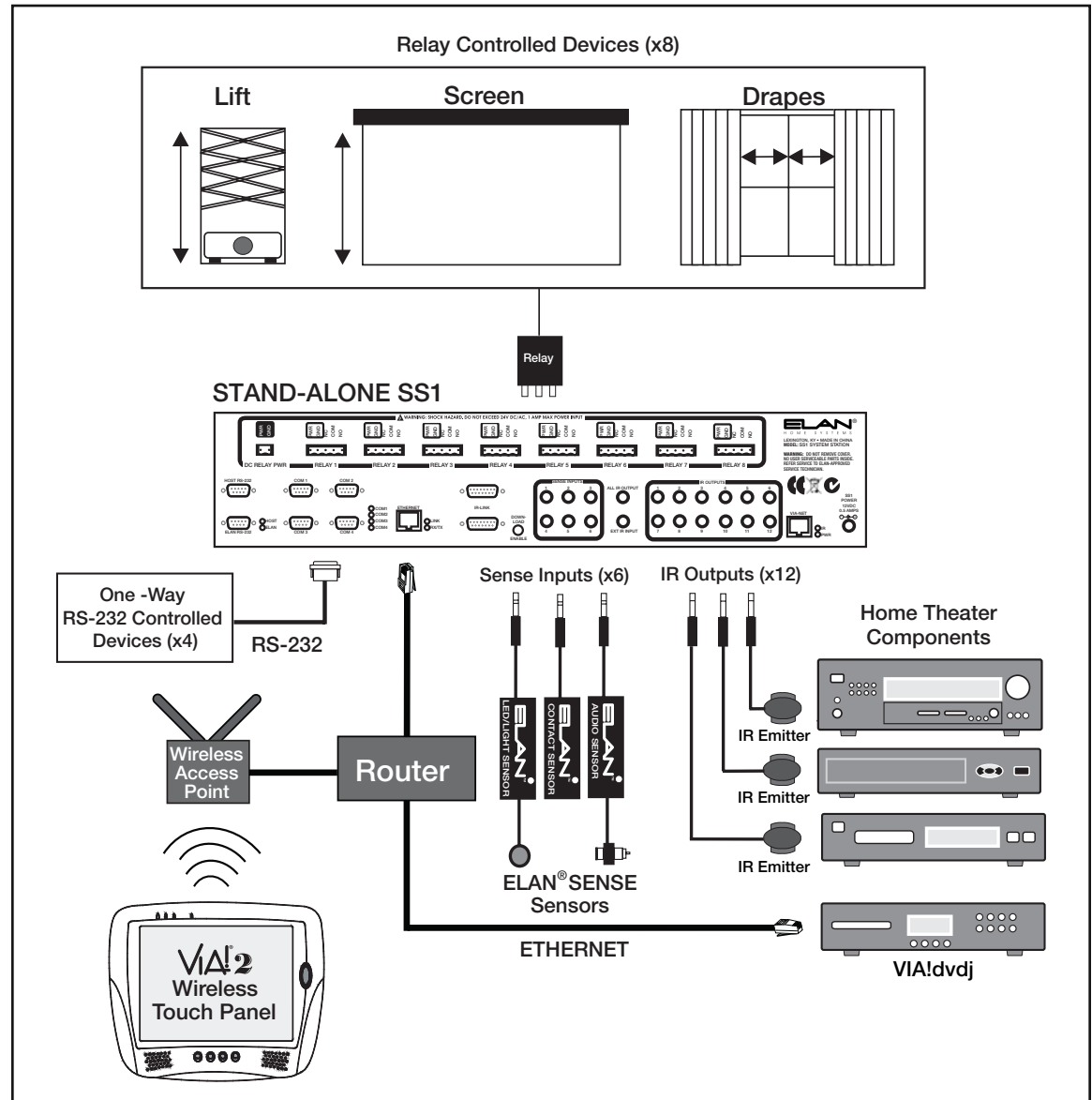


Figure 2.7 - Stand-Alone Home Theater w/ RS-232 Control

ZONE Applications

VIA!2-8.4 Wireless Zone Control

Zone applications utilize the SS1 as a control hub for a wireless VIA!2-8.4 Touch Panel (ZONE application) used as a controller for a zone of an ELAN Multi-Room Controller. One-way RS-232 control is available for devices that are only controlled from the zone in which the VIA!2-8.4 Touch Panel is assigned (local Home Theater equipment, for example). Relay and Sense functions are available for local systems, as well as IR control of local (in-zone) and system (available from any zone) devices. Be aware that two-way and system-wide RS-232 control is NOT available in this application.

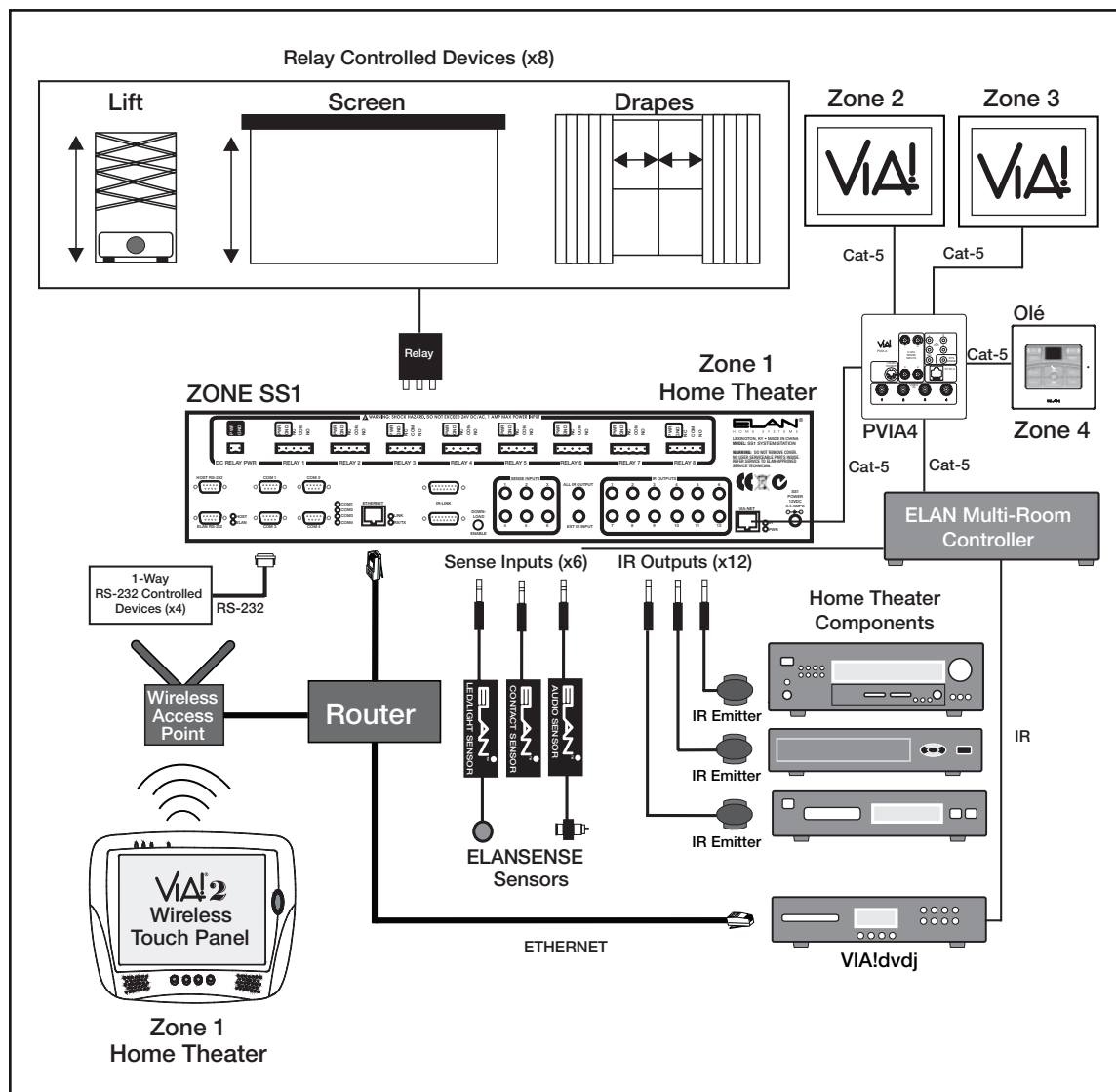


Figure 2.8 - Wireless Zone Control

VIA!2-8.4 Wireless Zone Control w/ Multiple Wireless Touch Panels

This application uses two VIA!2-8.4 Wireless Touch panels as ZONE controllers for an ELAN multi-room system. These wireless panels provide IR A/V source control, relay control, one-way control of local RS-232 devices, and automated functionality using ELANSENSE Sensors in their own zones (Zones 1 and 2). All zone functions and whole-house sources can also be controlled from these touch panels. An Olé Touchpad is assigned to control Zone 3 and a VIA!64 Touch Panel controls Zone 4. These VIA! and Olé can control system IR sources, but not the local IR components, relay controlled devices, or ELANSENSE functions.

Notice that this application uses one Wireless Access Point (WAP) and one Router. In certain cases, dedicated WAPs may need to be used in order to obtain proper signal strength and wireless coverage area.

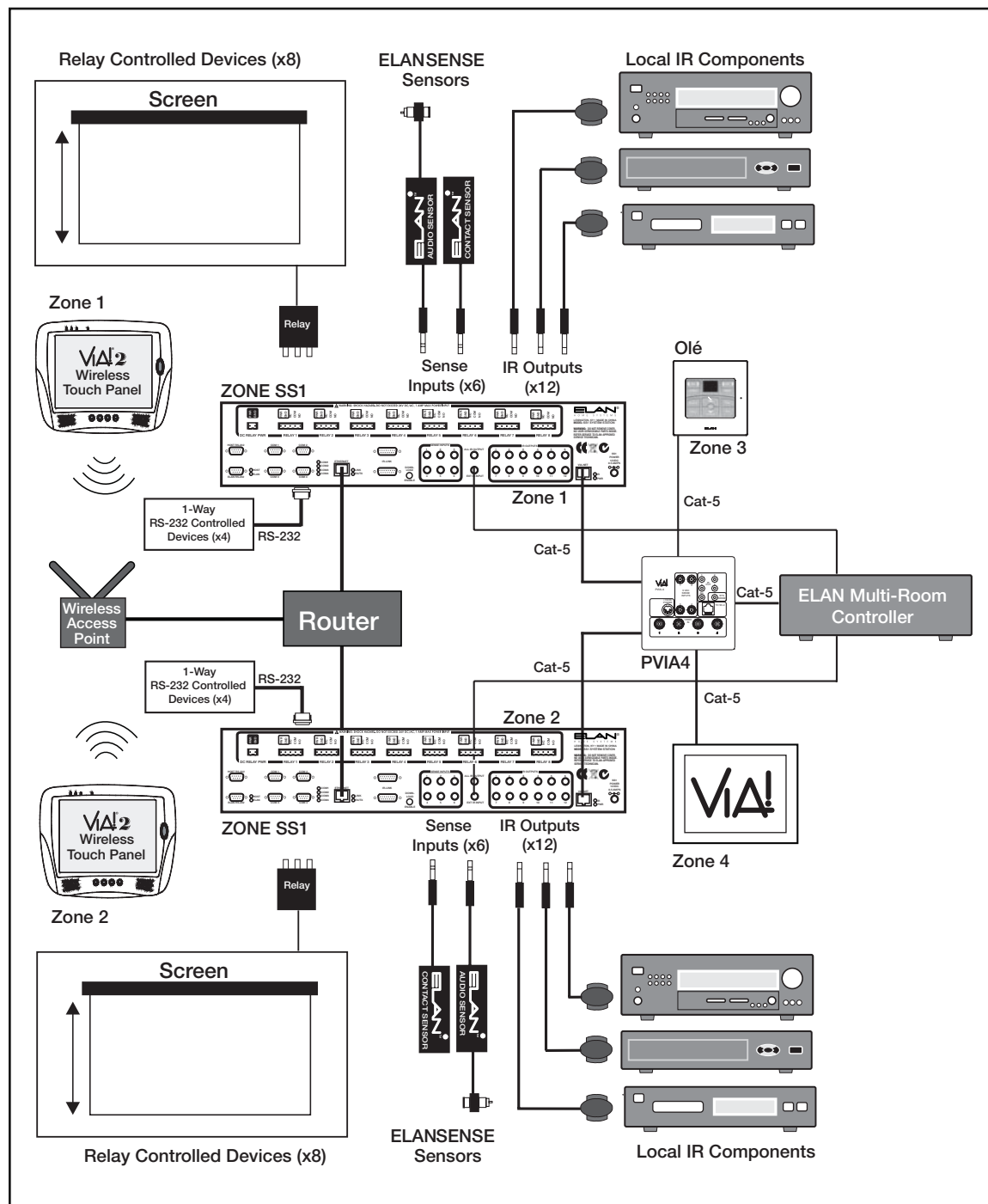


Figure 2.9 - Wireless Zone Control w/ Multiple Touch Panels/Olés

SYSTEM Applications

Basic Wired VIA! Touch Panel

SYSTEM SS1 applications involve the use of the SS1 in conjunction with wired VIA! Touch panels, Olé Touchpads and (often) ELAN Multi-Room Controllers. IR system control, IR source control, Relay functions, Sense Input functions and one or two-way RS-232 control are possible, as well.

The application shown here consists of a wired VIA! Touch panel controlling Relay devices, IR sources, ELANSENSE devices and one or two-way RS-232 devices.

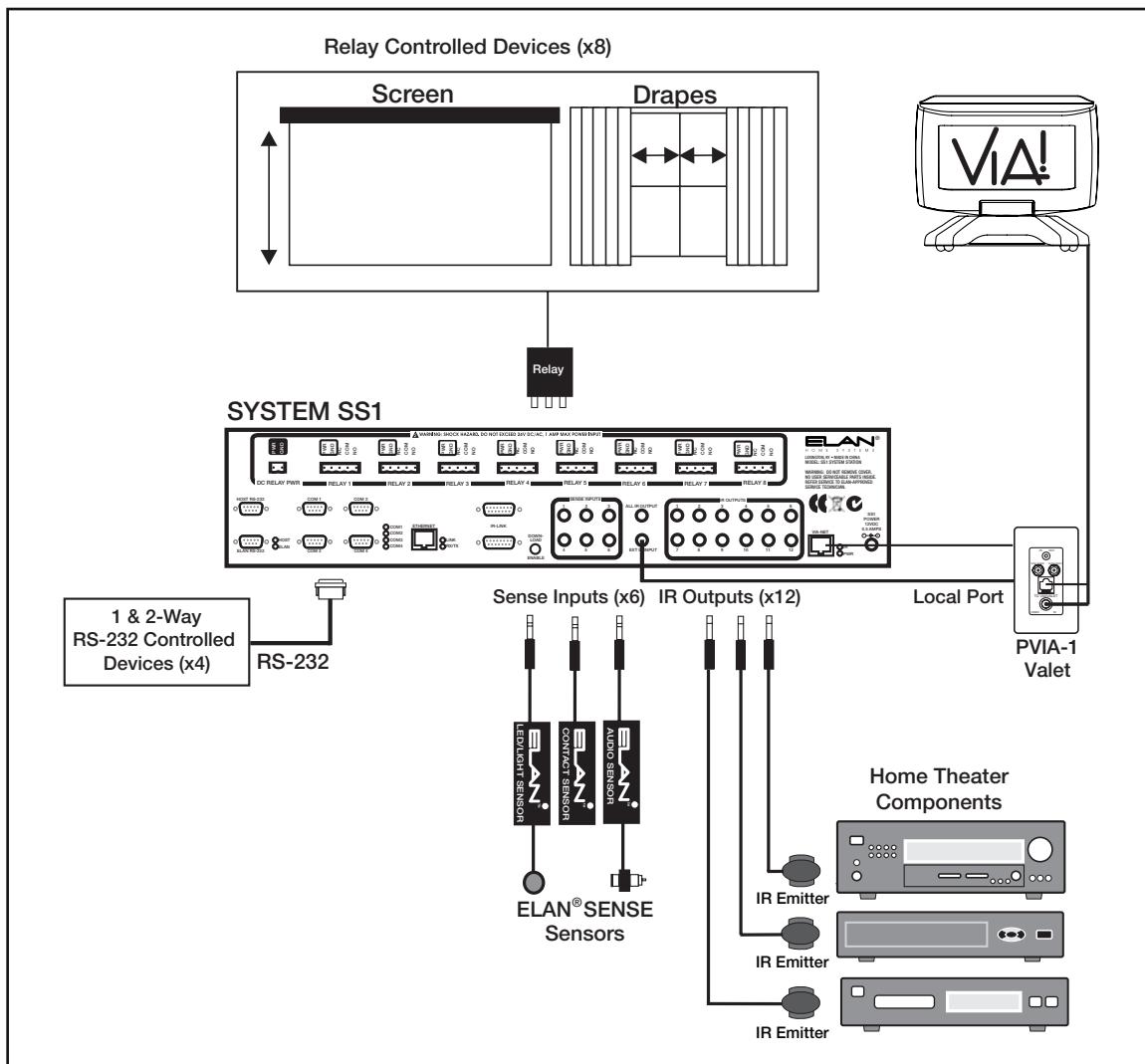


Figure 2.10 - Wired VIA! System

Multiple Wired VIA! Touch Panels & Olé Touchpad

The SYSTEM application shown here consists of wired VIA! Touch Panels and Olé Touchpads controlling Relay devices, IR sources, ELANSENSE devices and one or two-way RS-232 devices. Each function is available from all controllers in the system.

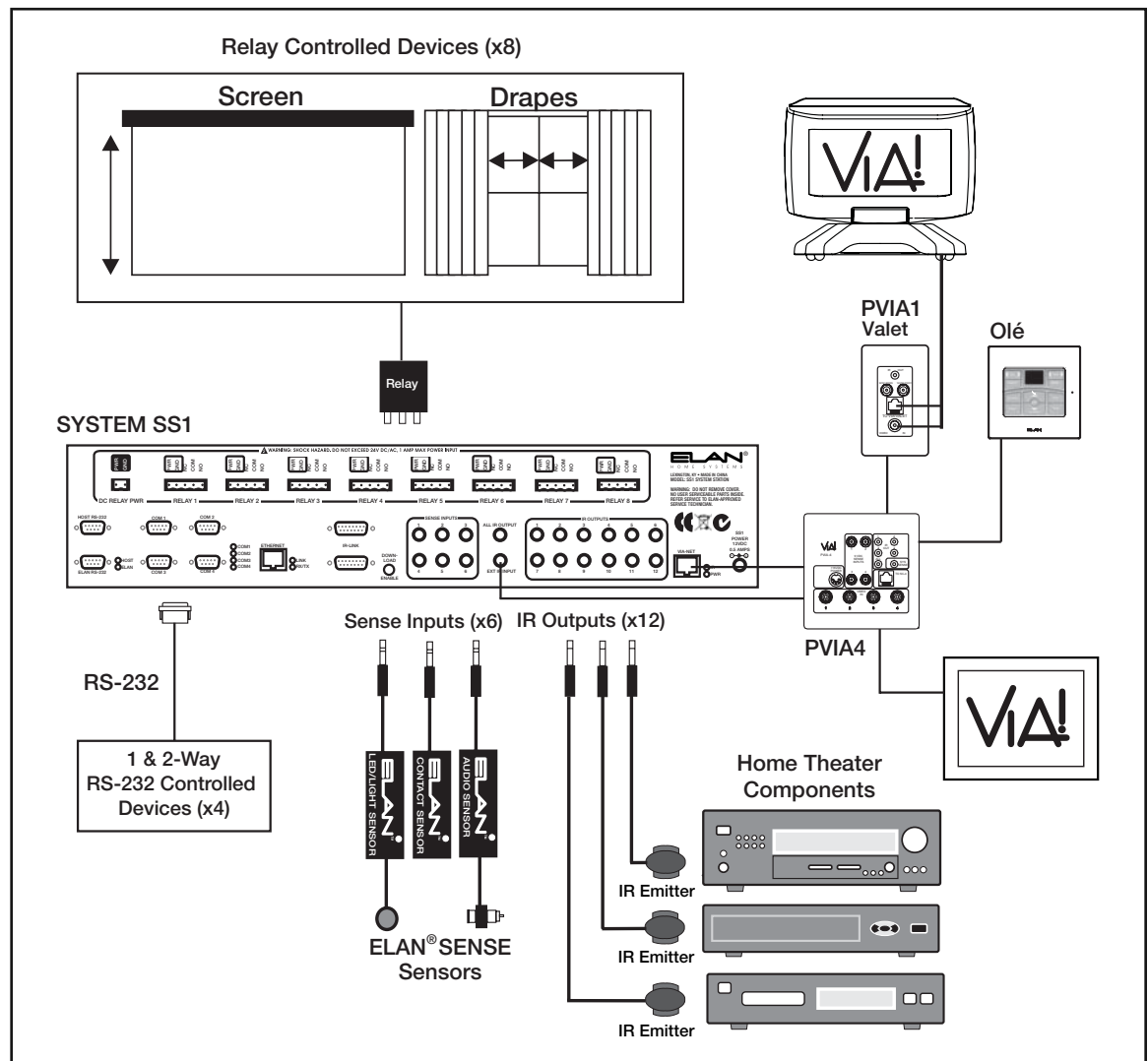


Figure 2.11 - Multiple Wired VIA!/Olé System

VIA!2-8.4 Wireless Touch Panel w/ Wired VIA! Touch Panels and Olé Touchpads

This application uses a VIA!2-8.4 Wireless Touch panel in combination with wired VIA! Touch Panels and Olé Touchpads controlling Relay devices, IR sources, ELANSENSE devices and one or two-way RS-232 devices. There are two SS1s required for this application: one used as a wireless hub for the VIA!2-8.4 (ZONE application) and one used as a SYSTEM controller.

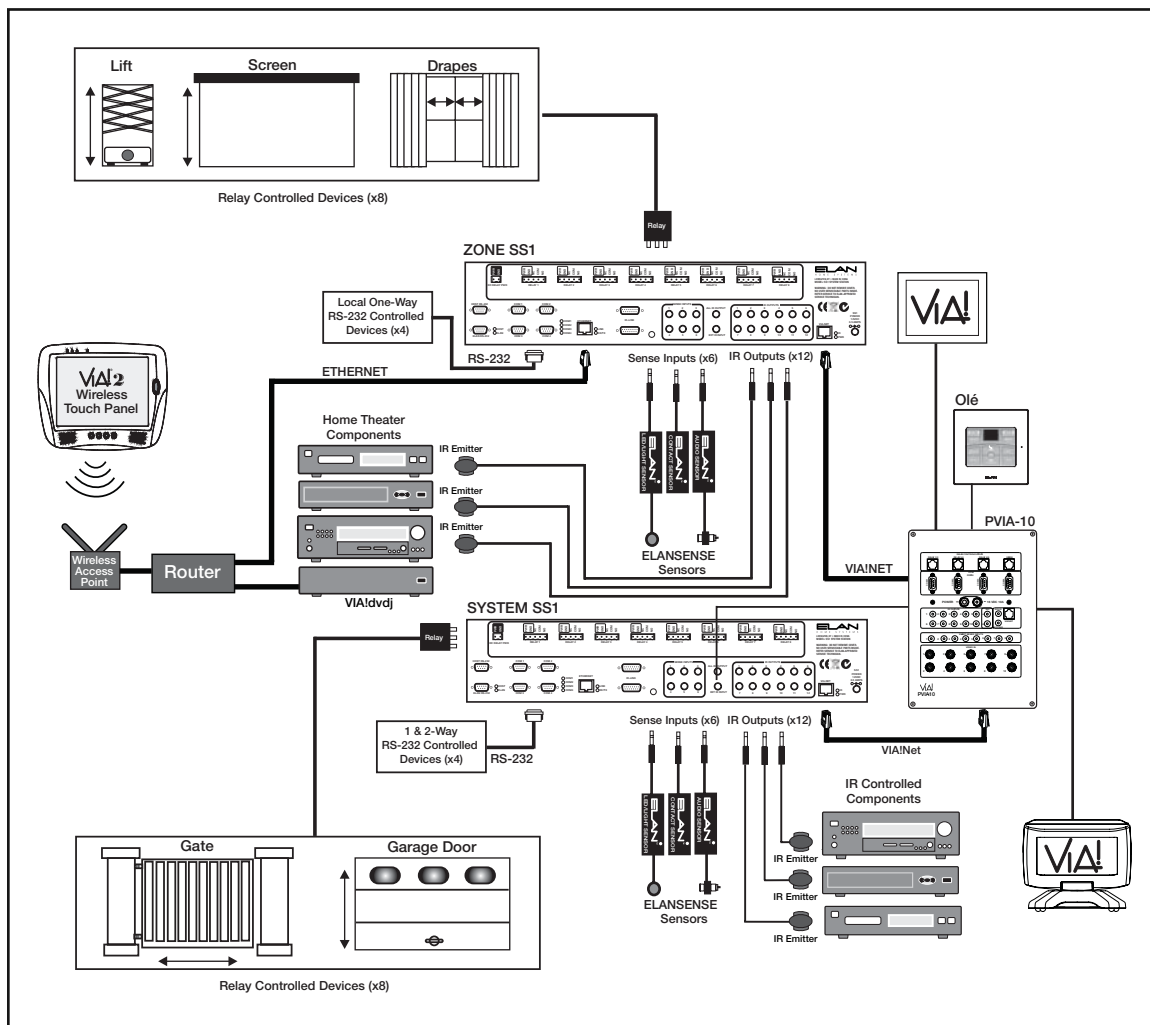


Figure 2.12 - WirelessVIA!/Wired VIA!/Olé System

Wired VIA! Touch Panels and Olé Touchpads - ELAN Z•System

This application uses wired VIA! Touch Panels and Olé Touchpads controlling an ELAN Z•630 Mult-Room Controller as well as Relay devices, local and system IR sources, ELANSENSE devices and one or two-way RS-232 devices. A PVIA10 Precision Panel is used in this SYSTEM application.

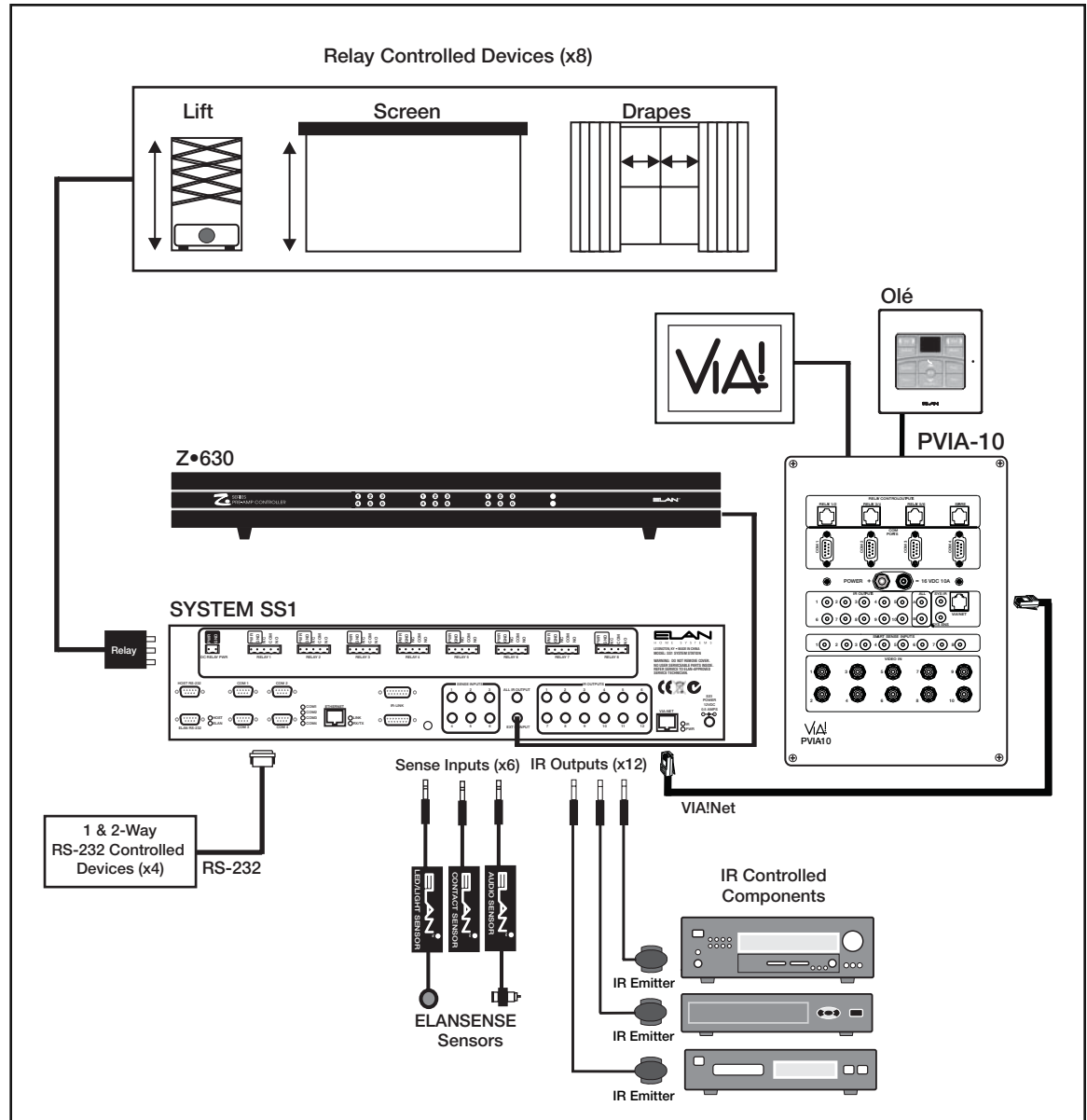


Figure 2.13 - Wired VIA!/Olé Z•System

Wireless VIA!8.4 and Wired VIA! Touch Panels and Olé Touchpads - ELAN Z•System

This application uses both a wireless VIA!2-8.4 and wired VIA! Touch Panels and Olé Touchpads controlling an ELAN Z•630 Mult-Room Controller as well as Relay devices, Local and System IR sources, ELANSENSE devices and one or two-way RS-232 devices. Two SS1s are used in this application: one as a wireless hub for the VIA!8.4 Wireless Touch Panel (ZONE application), and one as a SYSTEM controller. A PVIA10 Precision Panel is used in this application.

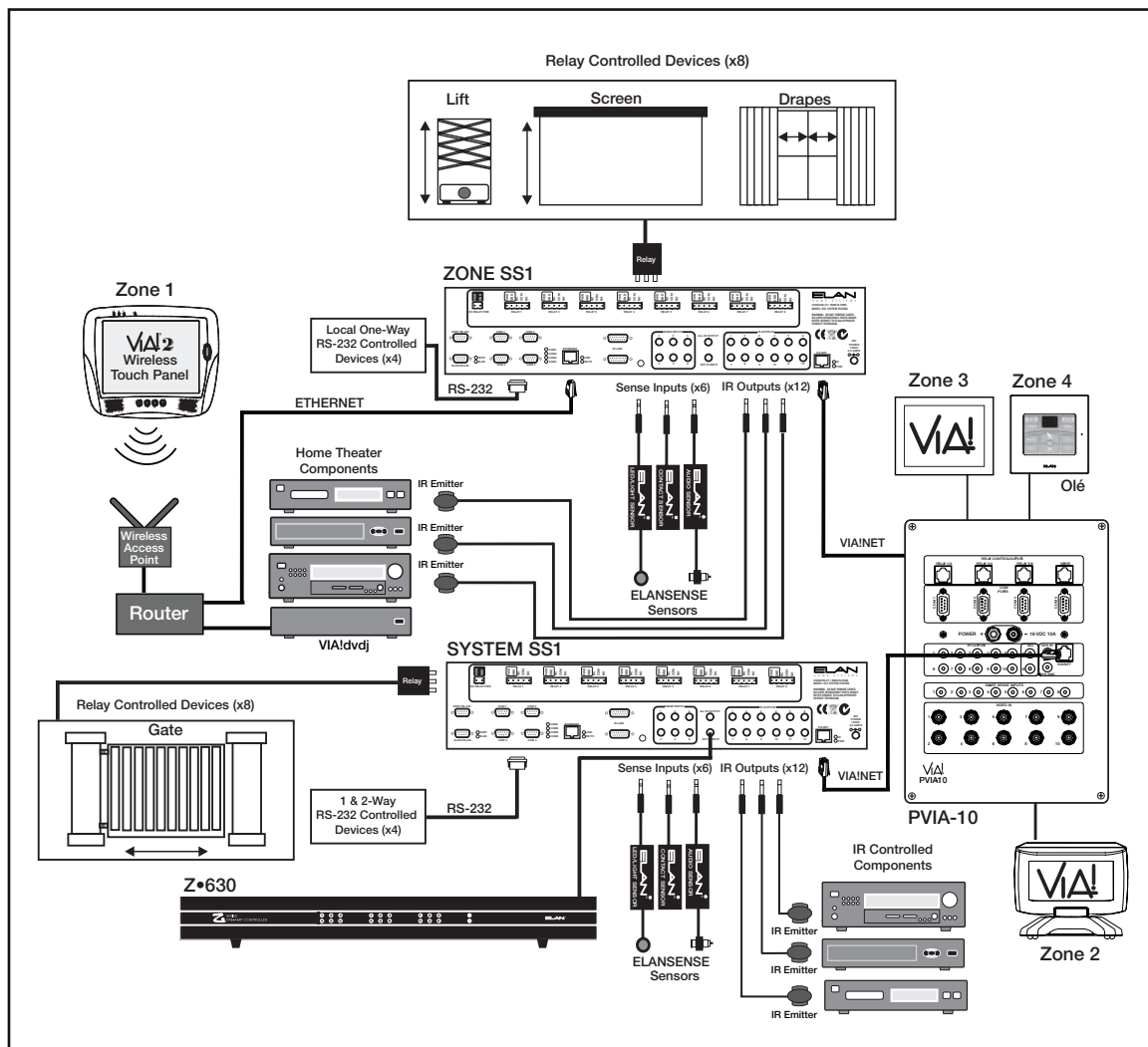


Figure 2.14 - Wireless VIA!/Wired VIA!/Olé Z•System

Wired VIA! Touch Panels and Olé Touchpads - ELAN System6

This application uses wired VIA! Touch Panels and Olé Touchpads controlling an ELAN System6 Mult-Room Controller as well as Relay devices, local and system IR sources, ELANSENSE devices and one or two-way RS-232 devices. A PS12 Precision Panel is used in this SYSTEM application.

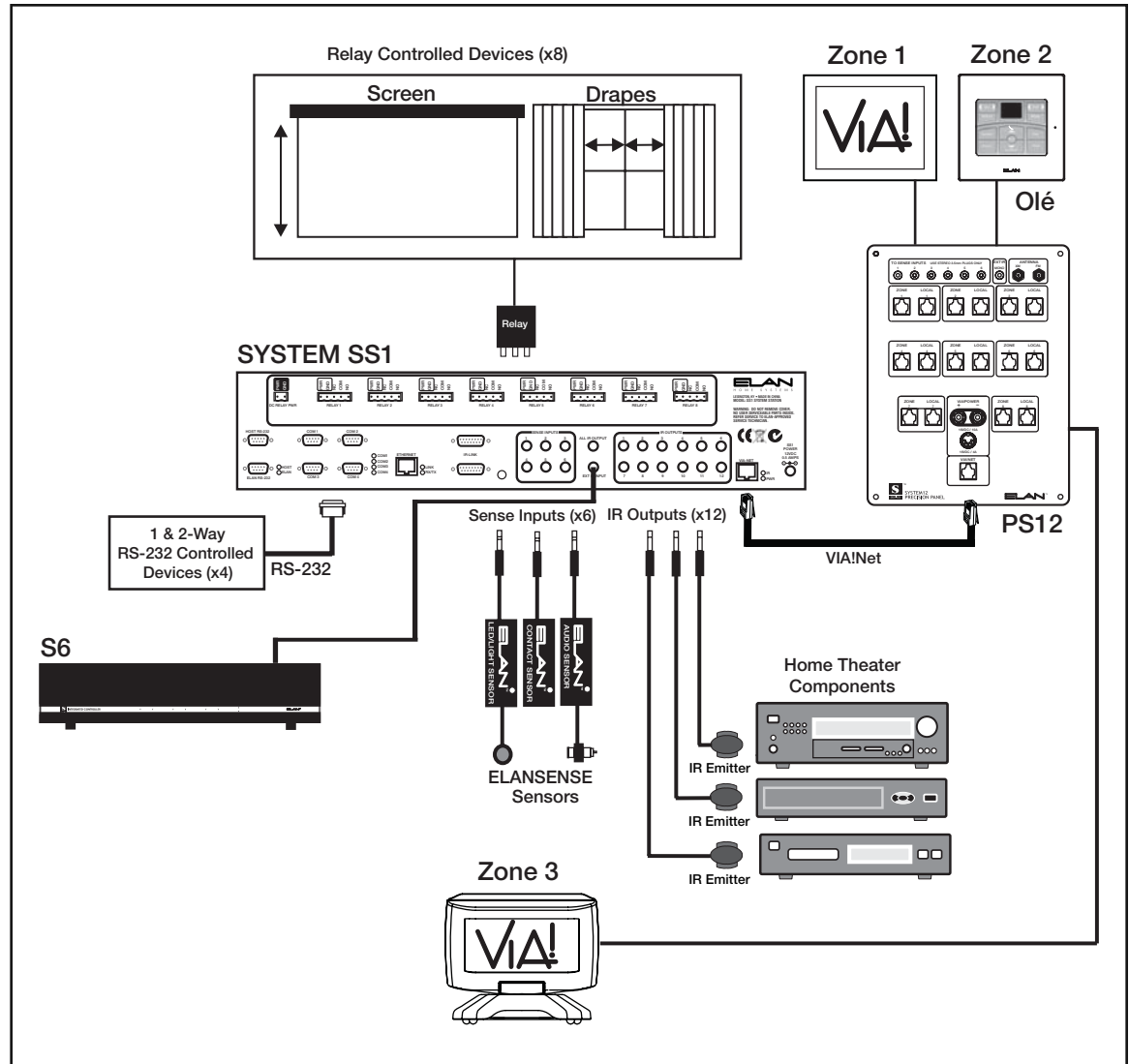


Figure 2.15 - Wired VIA!/Olé System6

Wireless VIA!8.4 and Wired VIA! Touch Panels and Olé Touchpads - ELAN System6

This application uses both a wireless VIA!2-8.4 and wired VIA! Touch Panels and Olé Touchpads controlling an ELAN System6 Mult-Room Controller as well as Relay devices, Local and System IR sources, ELANSENSE devices and one or two-way RS-232 devices. Two SS1s are used in this application: one as a wireless hub for the VIA!8.4 Wireless Touch Panel (ZONE application), and one as a SYSTEM controller. A PS12 Precision Panel is used in this application.

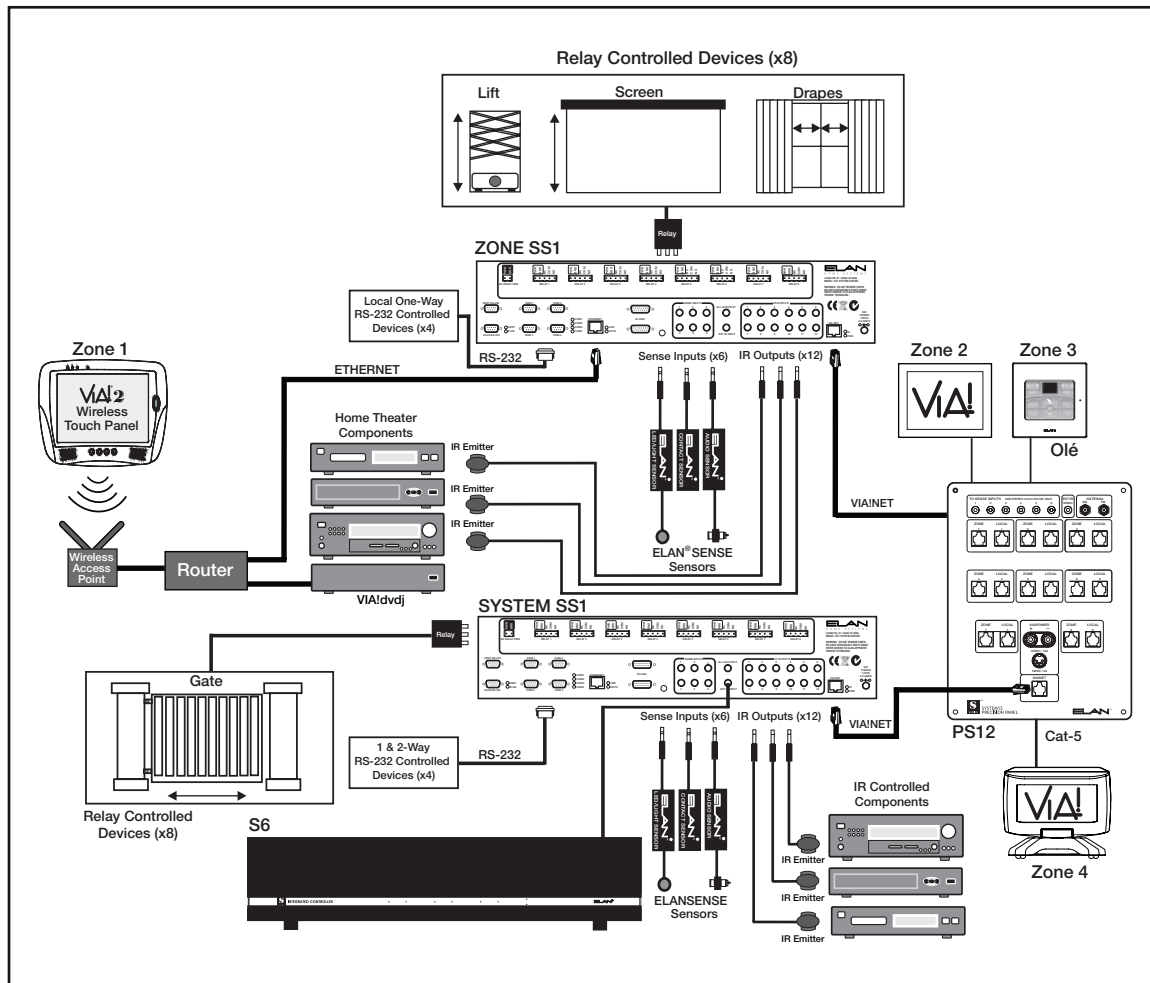


Figure 2.16 - Wireless VIA!/Wired VIA!/Olé System6

Wired VIA! Touch Panels and Olé Touchpads - ELAN System12

This application uses wired VIA! Touch Panels and Olé Touchpads controlling an ELAN System12 Mult-Room Controller as well as Relay devices, local and system IR sources, ELANSENSE devices and one or two-way RS-232 devices. A PS12 Precision Panel is used in this SYSTEM application.

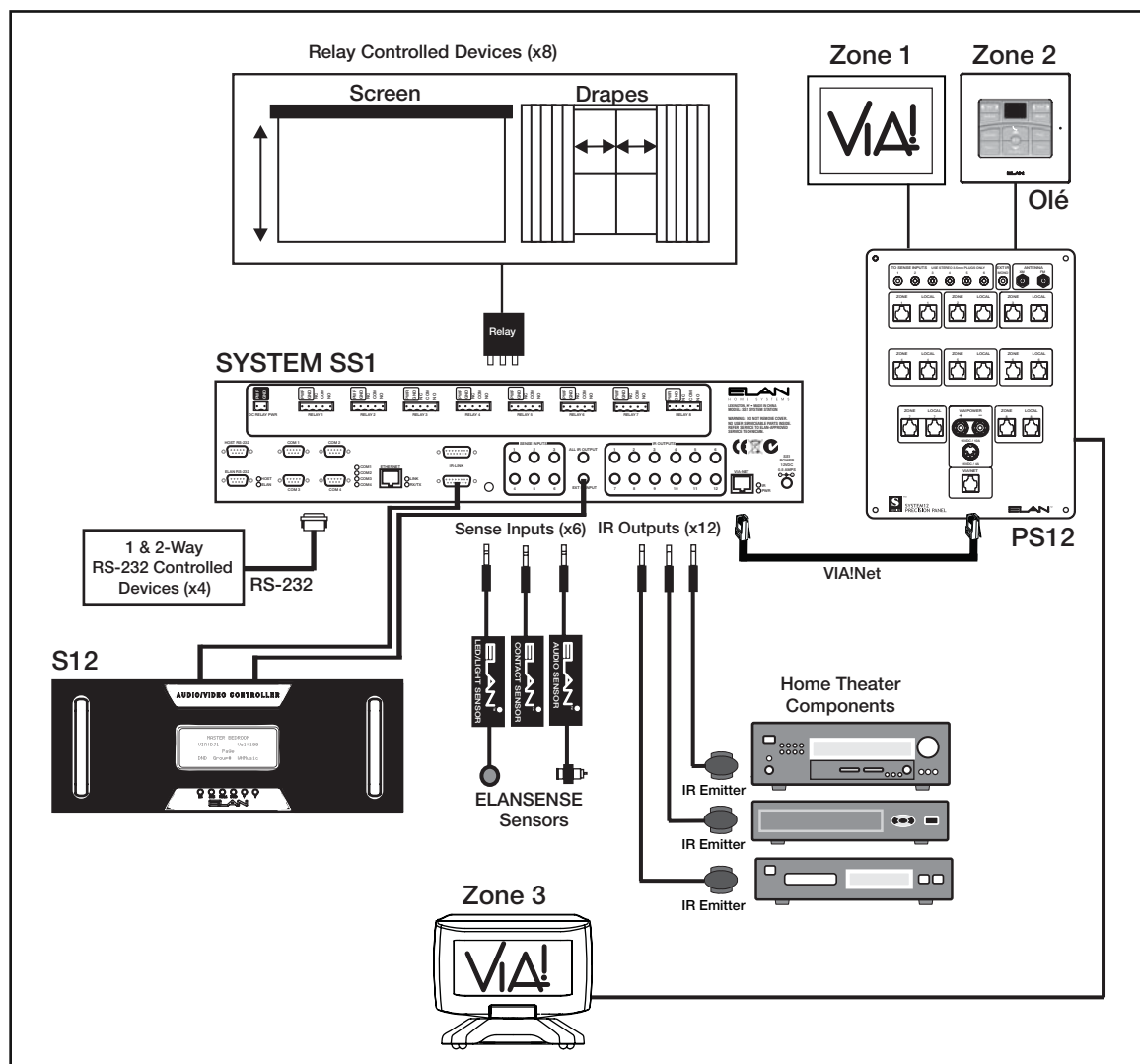


Figure 2.17 - Wired VIA!/Olé System12

Wireless VIA!8.4 and Wired VIA! Touch Panels and Olé Touchpads - ELAN System12

This application uses both a wireless VIA!2-8.4 and wired VIA! Touch Panels and Olé Touchpads controlling an ELAN System12 Mult-Room Controller as well as Relay devices, Local and System IR sources, ELANSENSE devices and one or two-way RS-232 devices. Two SS1s are used in this application: one as a wireless hub for the VIA!8.4 Wireless Touch Panel (ZONE application), and one as a System controller (SYSTEM application). A PS12 Precision Panel is used in this application.

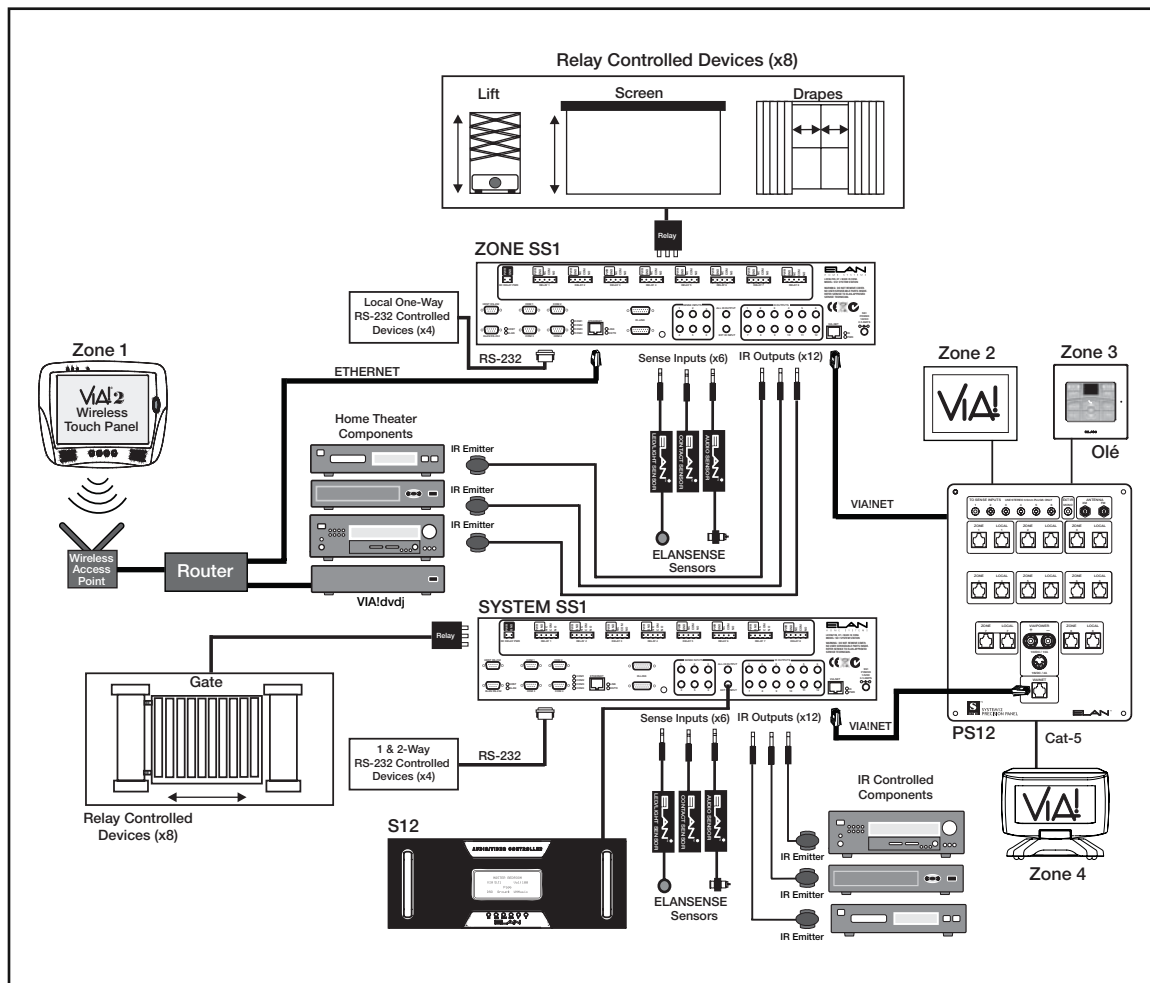


Figure 2.18 - Wireless VIA!/Wired VIA!/Olé System12

3. Installation

Installing Rack-Mount Brackets

The SS1 System Station is packaged with variable position rack-mount brackets in order to conveniently mount the unit into an equipment rack. Determine the best mounting location and orientation based on the layout of the equipment rack being used. The brackets can be mounted in one of four positions in order to orient the connections in an organized manner. See **Figure 3.1** and **3.2** for proper placement.

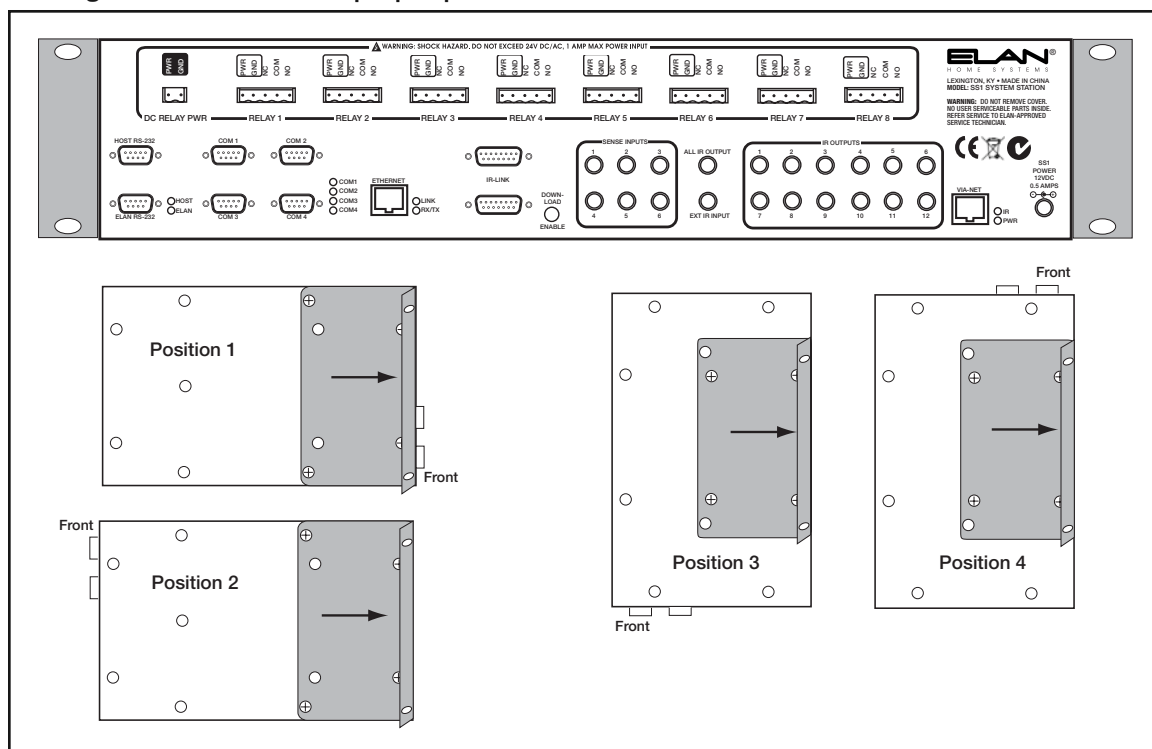


Figure 3.1 - Rack-Mount Brackets

Mounting into Equipment Rack

Once rack-mount brackets are installed, position the SS1 System Station into the rack in the position determined previously. System configuration will determine the correct positioning. Use four rack screws to mount the unit securely to the equipment rack.

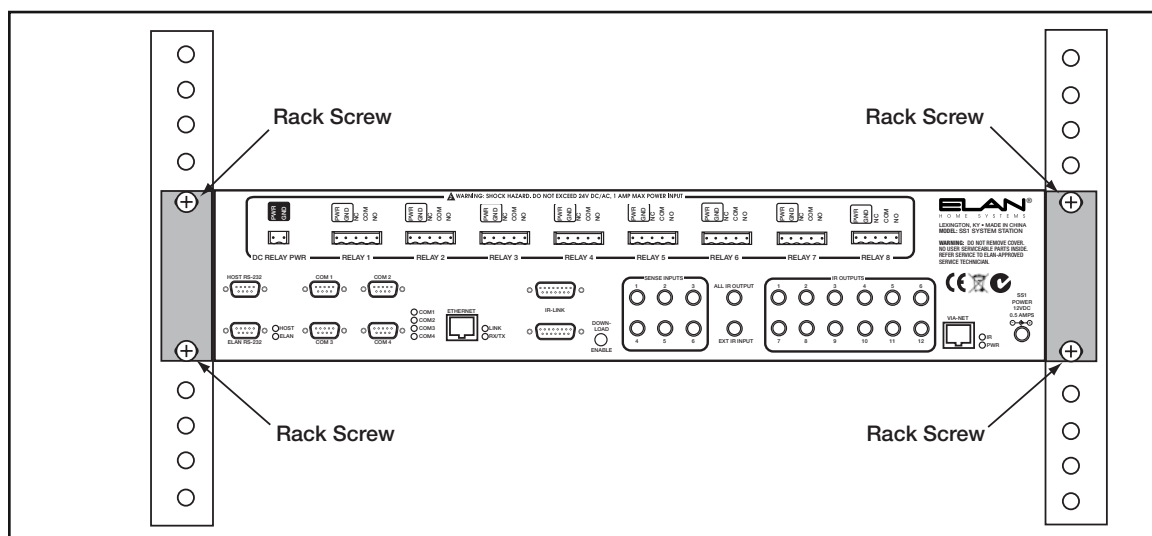


Figure 3.2 - Mounting Into Equipment Rack

4. Connections

This chapter describes all necessary connections for installing the SS1 System Station. It is divided into three sections: the first section describes all connections used when utilizing a PSS1 Precision Panel; the second section describes connections made when not utilizing a PSS1 Precision Panel; the third section contains connections that are required whether or not a PSS1 Precision Panel is used.

Connections When Using a PSS1 Precision Panel

PSS1

The PSS1 Precision Panel is designed to simplify connectivity when using an ELAN SS1 System Station. The use of ELAN Precision Panels provides a convenient termination point and add reliability and simplicity to any installation in which they are used. The rear panel of the PSS1 features a neatly laid out array of connectors provided for Relays, Sensors, RS-232 controlled devices (HVAC, Lighting, Security, etc.), Ethernet, VIA!NET, IR, and more. The PSS1's front panel provides Sense Inputs, IR Outputs, COM ports, Relays, VIA!NET, and Ethernet connections that coincide with all of the relevant connectors on the SS1 System Station.

NOTE: The use of a PSS1 Precision Panel is *HIGHLY RECOMMENDED!*

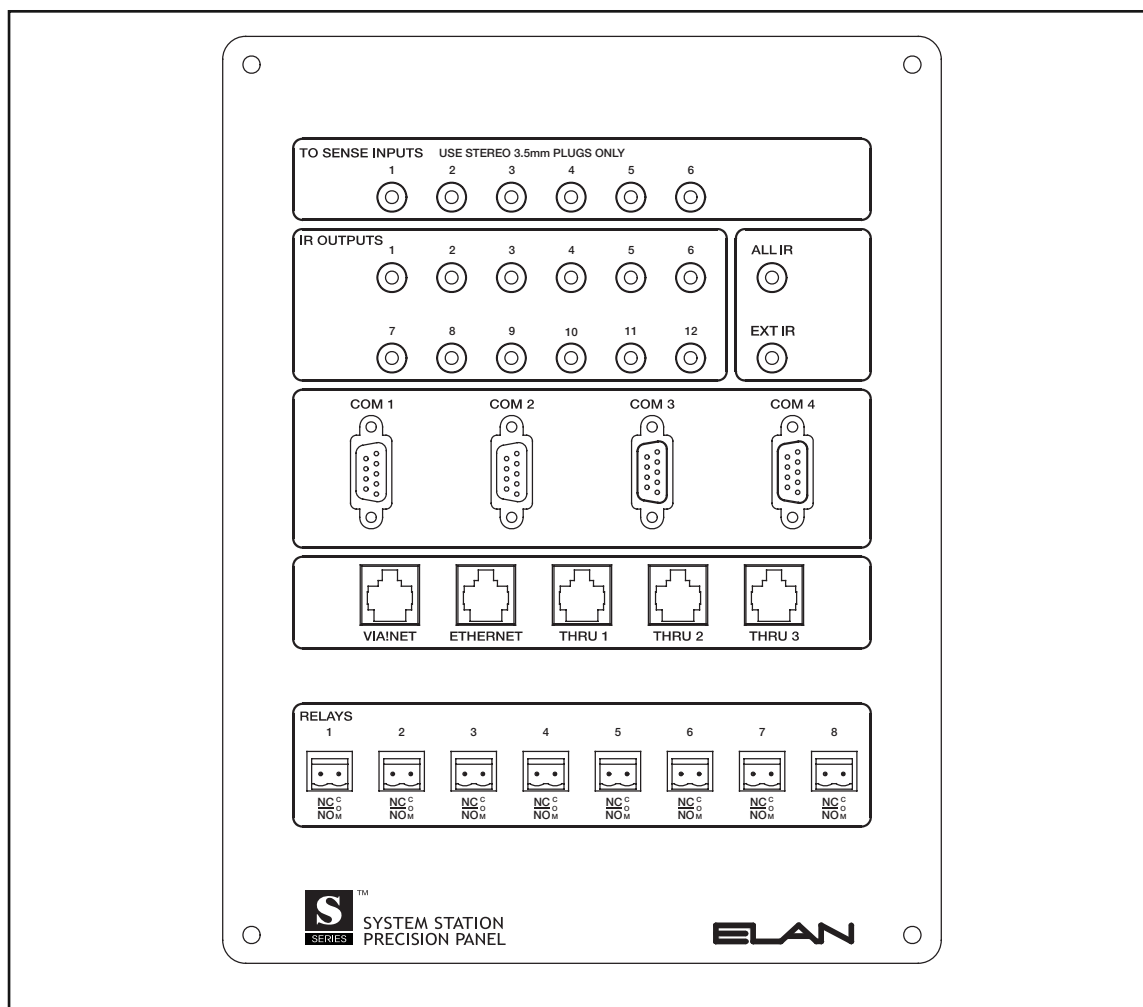


Figure 4.1 - PSS1 Precision Panel-Front



All Cat-5 connections (except Ethernet connections) described in this manual will use ELAN's standard pinout configuration, as shown below.



The SS1 System Station provides eight closed-contact relays that can be programmed with VIA!TOOLS to provide automated events such as lift operation, screen operation, and draperies. Connections include PWR, GND, COM, and NC/NO.



Use a Cat-5 wire with ELAN Standard RJ-45 pinout to connect the SS1 System Station to a system's VIA!NET and ZNET when installing ELAN devices including S6, S12, and Z•630 Multi-Room Controllers and other SS1s.

VIA!NET

SS1

ELAN C4545
RJ45-to-RJ45
Patch Cable

PSS1-Front

VIA!NET

PSS1-Rear

VIA!NET RS-485

SNSO
IRVIA
V485N
V485P
Z485N
Z485P
G
NC

Figure 4.5 - VIA!NET/ZNET Connections

Z•630 - PSS1 VIA!NET to PZ6 & PVIA4 Connections

The drawing below shows advanced VIA! NET and Z NET connections required when connecting a ZONE SS1 to an ELAN Z•630 Multi-Room Controller utilizing a PZ6 Precision Panel, a PVIA4 Precision Panel, and a SYSTEM SS1. Note that both VIA!NET and ZNET connections are required.

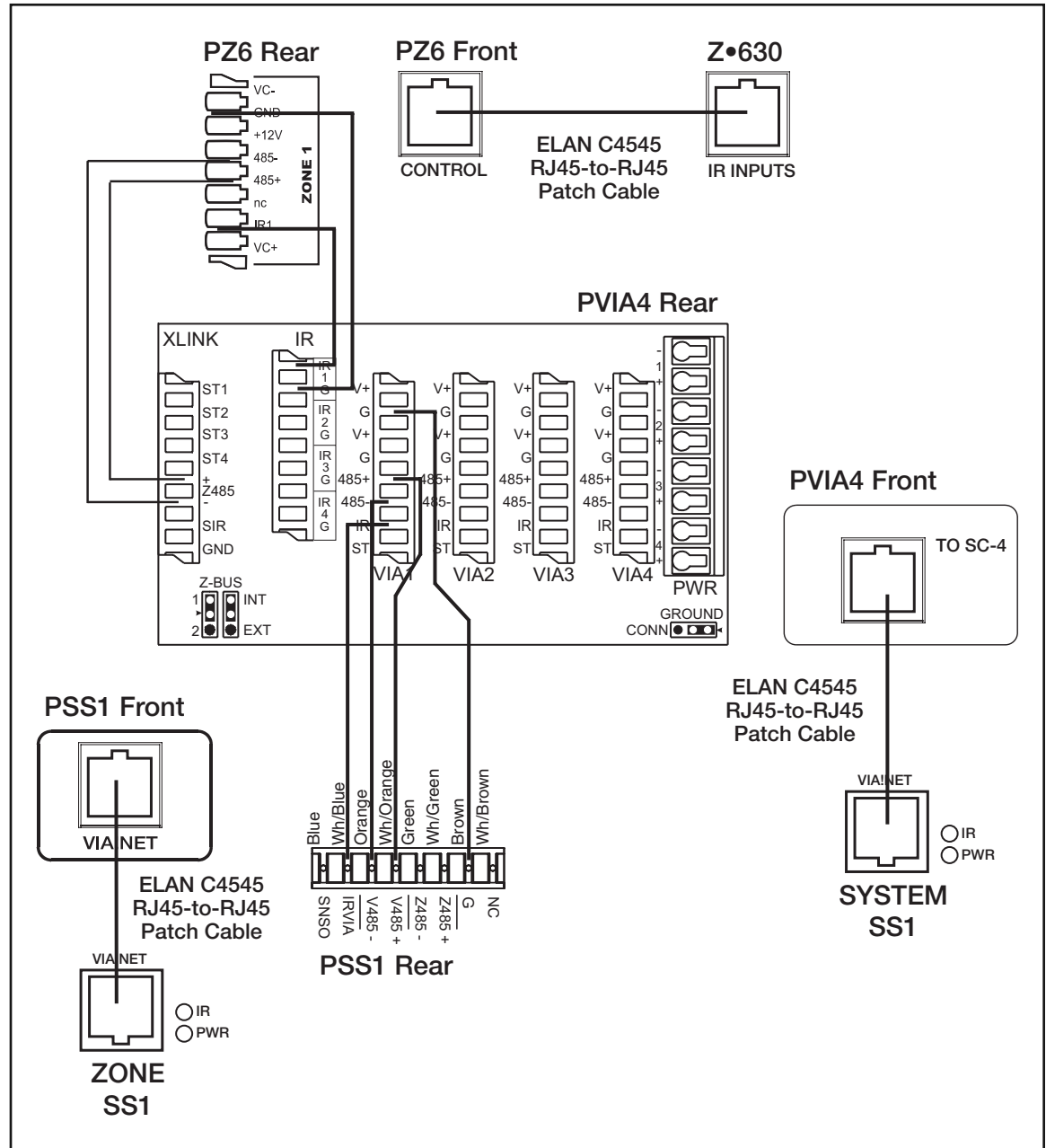


Figure 4.6 - Z•630 VIA!NET/ZNET Connections

System6 - PSS1 VIA! NET to S6 & PVIA4 Connections

Figure 4.7 shows advanced VIA!NET and ZNET connections required when connecting a ZONE SS1 System Station to an ELAN S6 Multi-Room Controller and a SYSTEM SS1. Note that both VIA! NET and Z NET connections are required.

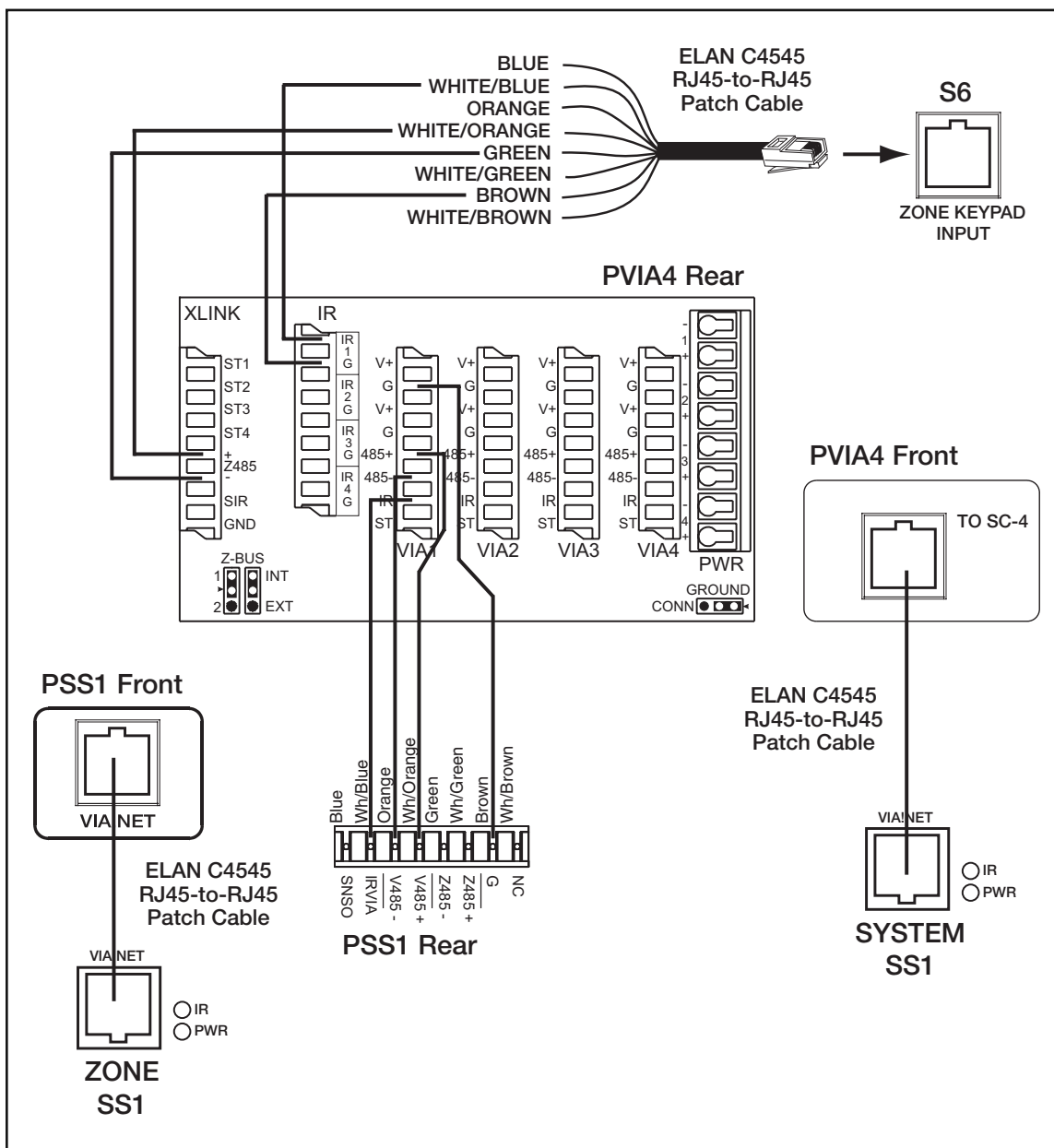


Figure 4.7 - S6 VIA!NET/ZNET Connections

System12 - PSS1 VIA!NET to PS12 Connections

Figure 4.8 shows advanced VIA!NET and ZNET connections required when connecting a ZONE SS1 System Station to an ELAN S12 Multi-Room Controller utilizing a PS12 Precision Panel and a SYSTEM SS1. Note that both VIA!NET and ZNET connections are required.

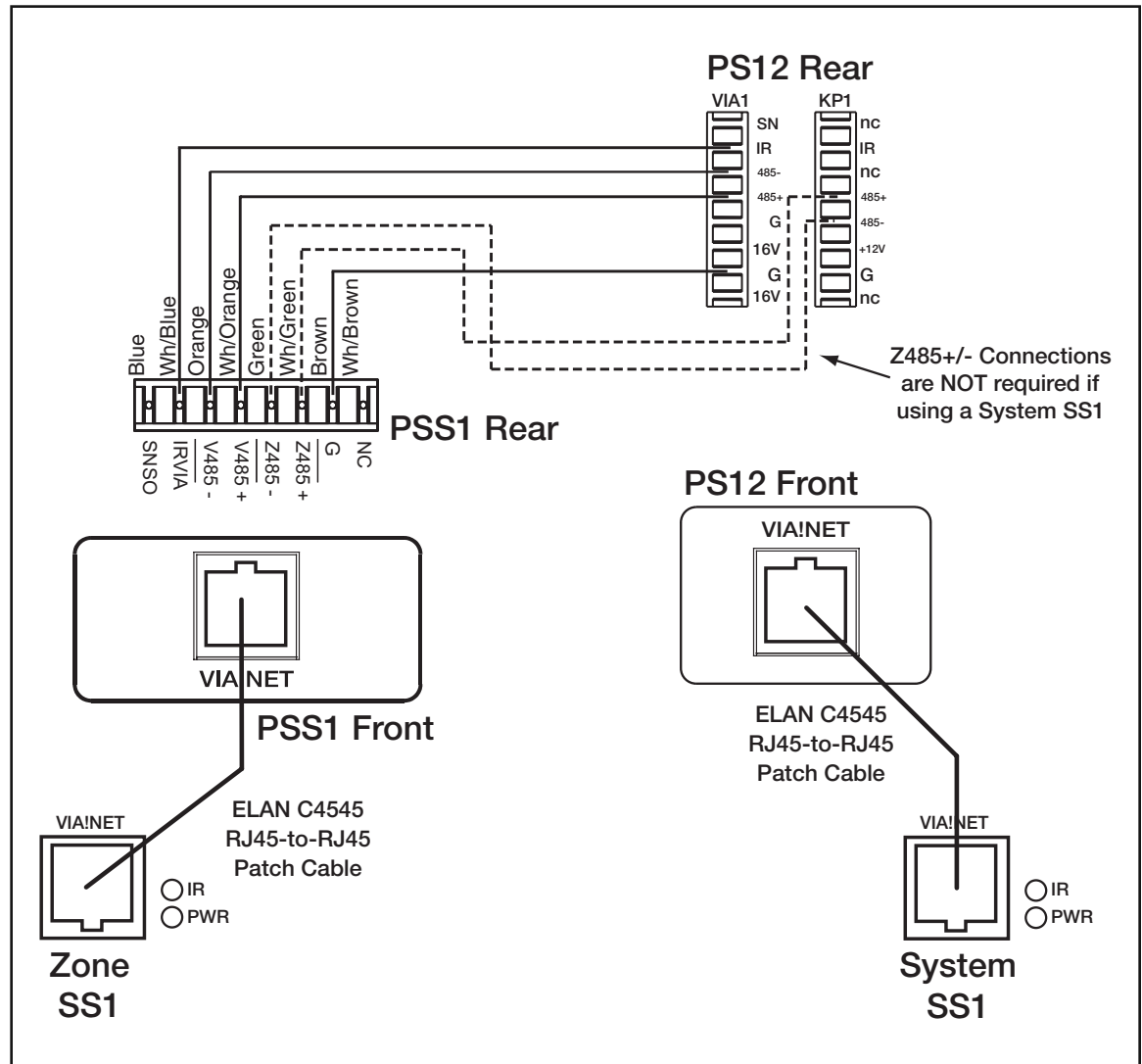


Figure 4.8 - S12 VIA!NET/ZNET Connections

IR Outputs

The programmable IR Outputs are typically used to control Audio/Video and other sources using IR. Connect 3.5mm interconnect cables from the SS1 System Station to the front of the PSS1. Connect single or dual IR emitters from the rear of the PSS1 to the devices to be controlled. Make sure to pay close attention to which ports are connected to which sources for IR routing purposes. There are twelve source-specific IR ports on each SS1.

Front Connections

Connect 3.5mm interconnect cables from the SS1 System Station to the front of the PSS1 as shown below.

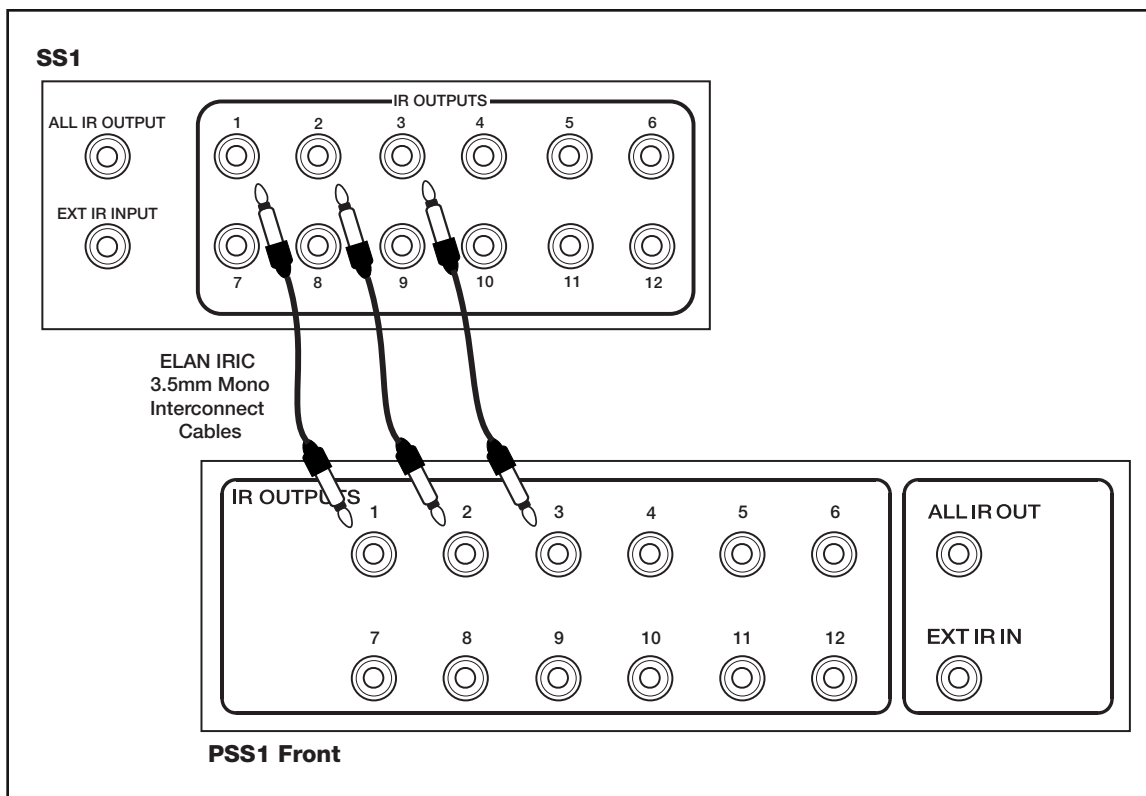


Figure 4.9 - IR Output Connections-Front

Rear Connections

Punch-down bare leads of IR emitters (ELAN's IRE1, for example) from the source-specific punchdown locations on the back of the PSS1 to the sources that are to be controlled. Use Cat-5 to extend these wires, as necessary.

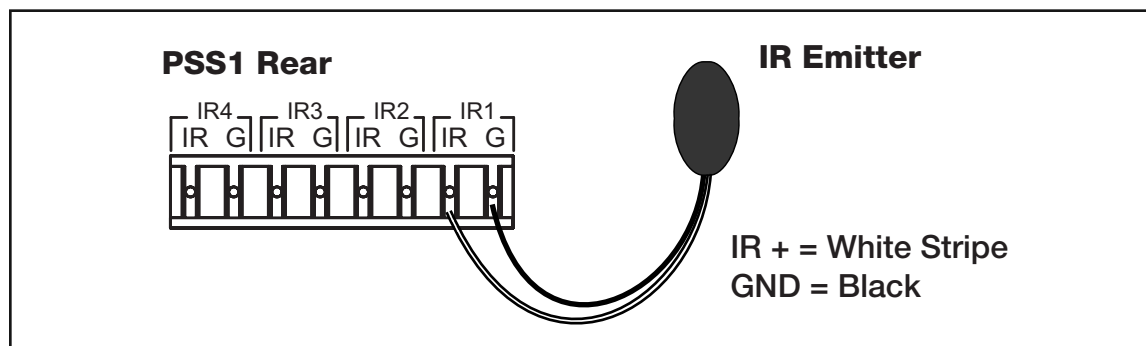


Figure 4.10 - IR Output Connections-Rear

ALL IR Output

Any IR signal sent out of the SS1 System Station will come out of the ALL port. Use this port for non-identical IR sources and for sources that need to be controlled regardless of what source is actually selected (A/V receivers or TVs, for example).

Front Connections

Connect mono 3.5mm interconnect cables from the SS1 System Station to the front of the PSS1 as shown below.

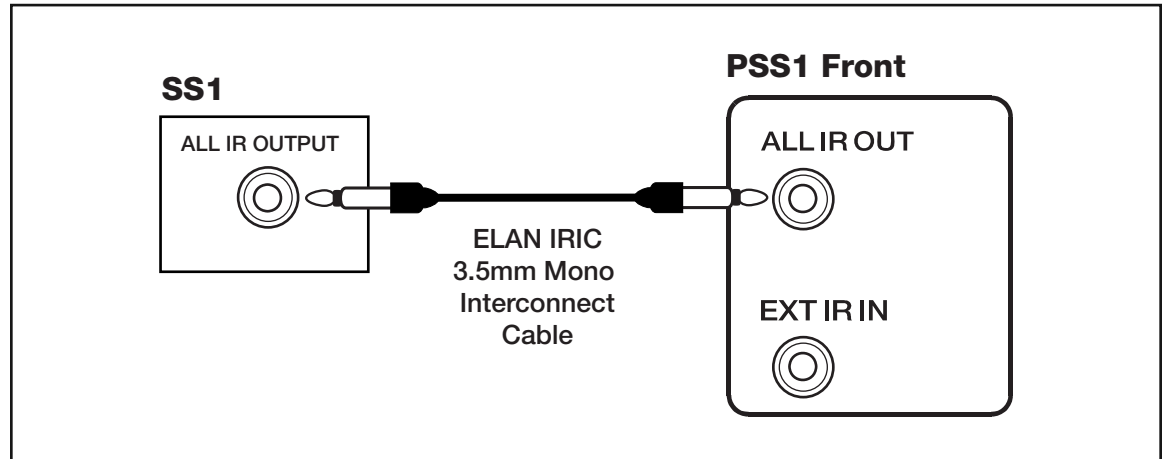


Figure 4.11 - ALL IR Output Connections-Front

Rear Connections

Punch-down bare leads of IR emitters (ELAN's IRE1, for example) from the ALL IR OUT punchdown locations on the back of the PS12 to the sources to be controlled. Use Cat-5 to extend these wires, as necessary. Two punchdown locations are provided, each which will hold two wires.

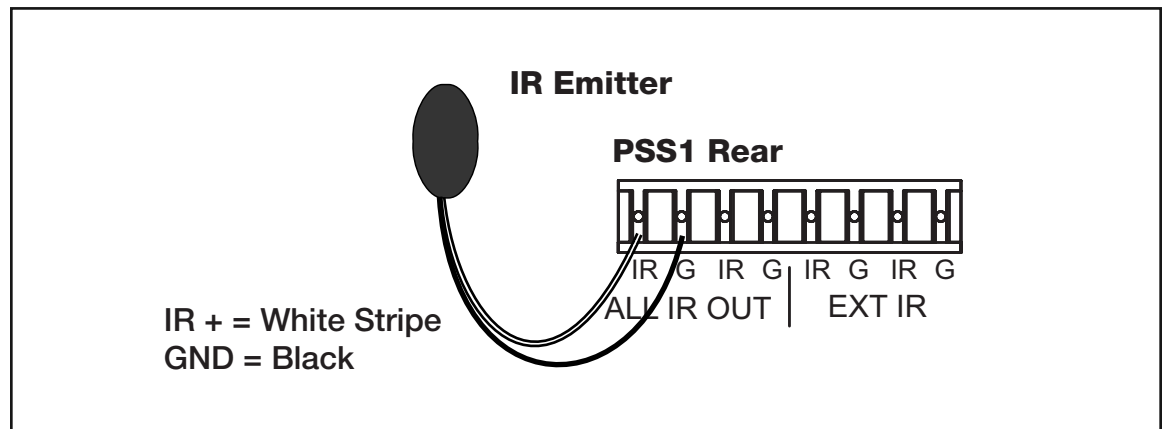


Figure 4.12 - ALL IR Output Connections-Rear

EXT IR Input

IR signals can be sent from a location that is not part of a zone to control system sources. An external power supply must be used to power an IR receiver or keypad assigned to this function.

Front Connections

Connect a mono 3.5mm interconnect cable from the SS1 System Station to the front of the PSS1 as shown below.

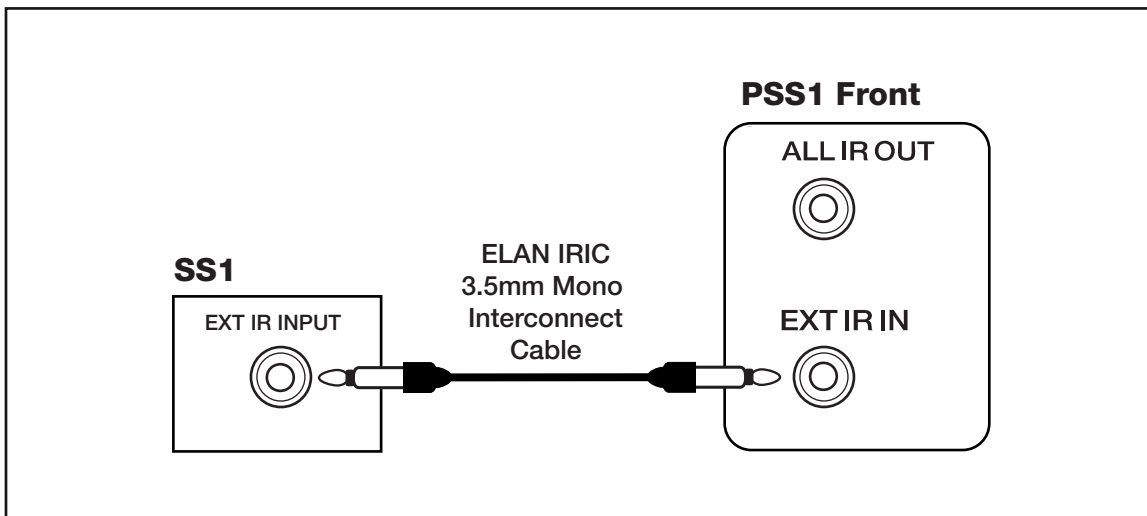


Figure 4.13 - EXT IR Input Connections-Front

Rear Connections

Punch-down IR and Ground wires from an IR Output of an ELAN Multi-Room Controller, IR distribution block (such as ELAN's IRD4), or IR receiver. Two punchdown locations are provided, each which will hold two wires.

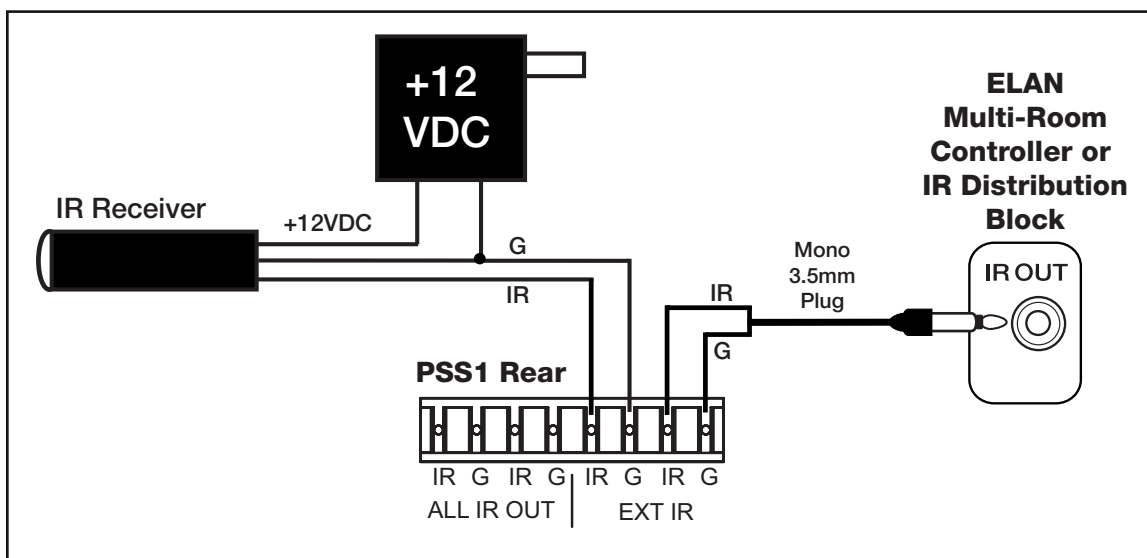


Figure 4.14 - EXT IR Input Connections-Rear

Sense Inputs

Plug in ELANSENSE sensors to create automated events based on triggers.

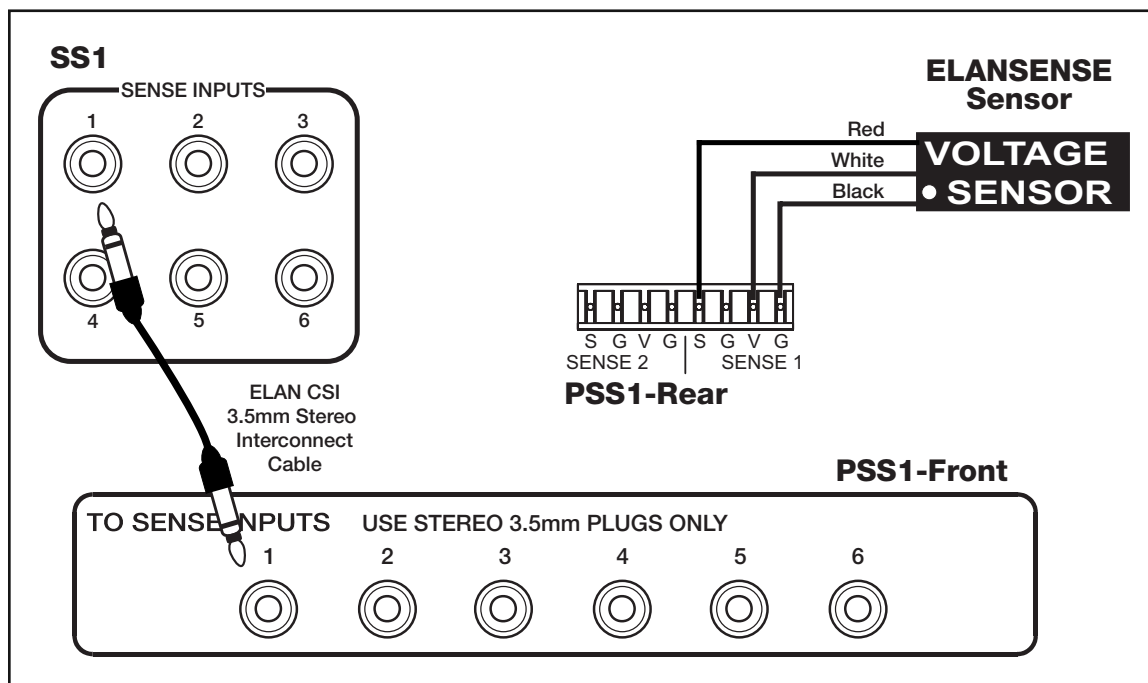


Figure 4.15 - Sense Input Connections

Ethernet Port

Use the Ethernet Port to connect the SS1 System Station to a router. This port is also used to interconnect multiple SS1s. Use TIA568-A wiring standard for this connection. **Do not** use ELAN standard pinout for Ethernet connections!

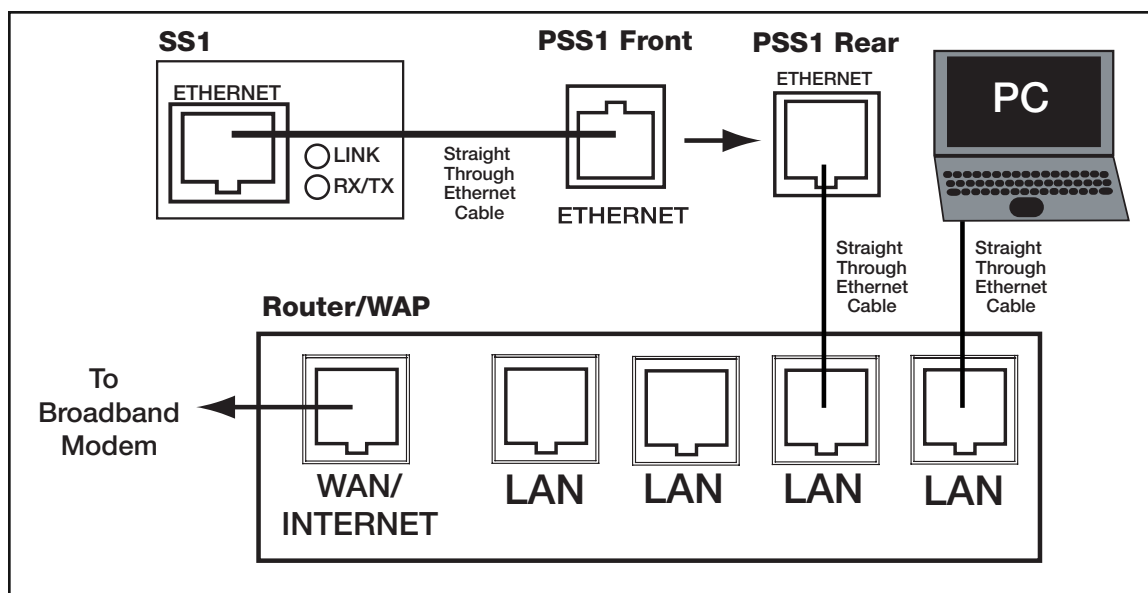


Figure 4.16 - Ethernet Connections

COM 1-4

The COM 1-4 ports are designed to control external RS-232 devices such as Lighting, HVAC, and Security systems. Connect DB-9 serial cables or Cat-5 with DB-9 connectors between the VIA2-SS1 and the PSS1 as shown. **Figure 4.17** shows pinout positions of the COM ports.

Note: COM1 and COM2 are male connectors. COM3 and COM4 are female connectors. It is necessary to use a null modem gender changer if the RX/TX are reversed on a particular product.

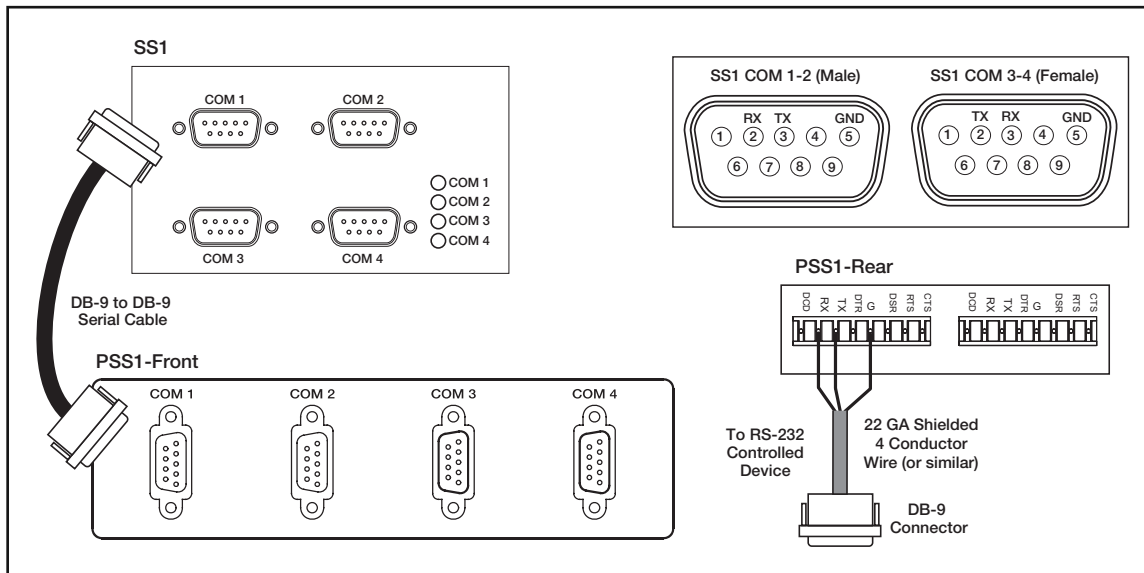


Figure 4.17 - COM1-4 Connections

Connections When Not Using a PSS1 Precision Panel

It is possible to make connections for the SS1 System Station without the use of a PSS1 Precision Panel. This section describes these connections.

NOTE: The use of a PSS1 Precision Panel is **HIGHLY RECOMMENDED!**

Relay 1-8

The SS1 System Station provides eight closed-contact relays that can be programmed with VIA!TOOLS to provide automated events such as lift operation, screen operation, and draperies. Connections include PWR, GND, NC, COM, and NO.

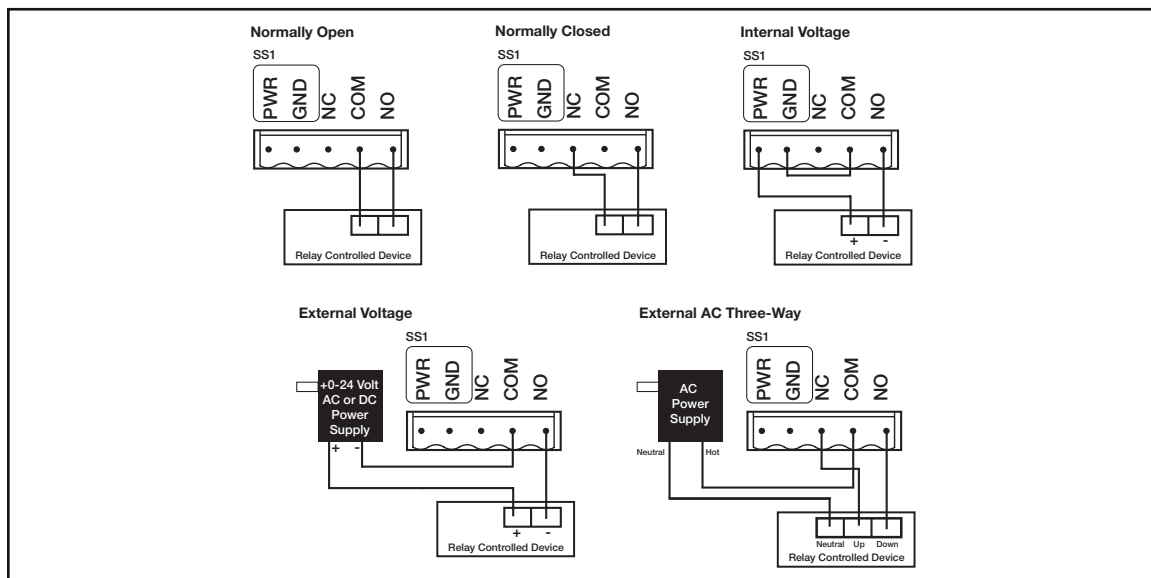


Figure 4.18 - Relay 1-8 Connections-No PSS1

VIA!NET/ZNET

Use a Cat-5 wire with ELAN Standard RJ-45 pinout to connect the SS1 System Station to a system's VIA!NET and ZNET when installing ELAN devices including S6, S12, and Z•630 Multi-Room Controllers and SC-4 System Controllers.

NOTE: Use of system-specific Precision Panels for S and VIA! is required for proper functionality when integrating serial controlled devices with the SS1 System Station.

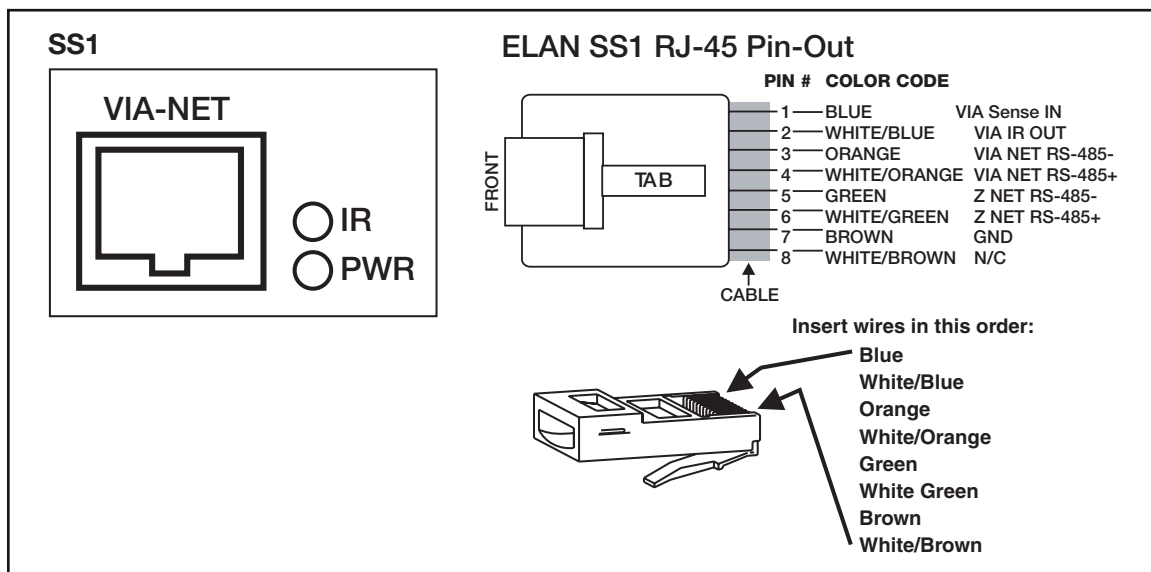


Figure 4.19 - VIA!NET/ZNET Connections-No PSS1

Z•630 - VIA! NET to Z•630 & PVIA4 Connections

The drawing below shows advanced VIA!NET and ZNET connections required when connecting a ZONE SS1 System Station to an ELAN Z•630 Multi-Room Controller utilizing a SYSTEM SS1. Note that both VIA! NET and Z NET connections are required.

NOTE: The use of PSS1 and PZ6 Precision Panels is **HIGHLY RECOMMENDED!** Use of a PVIA4 or PVIA10 Precision Panel is required for this application.

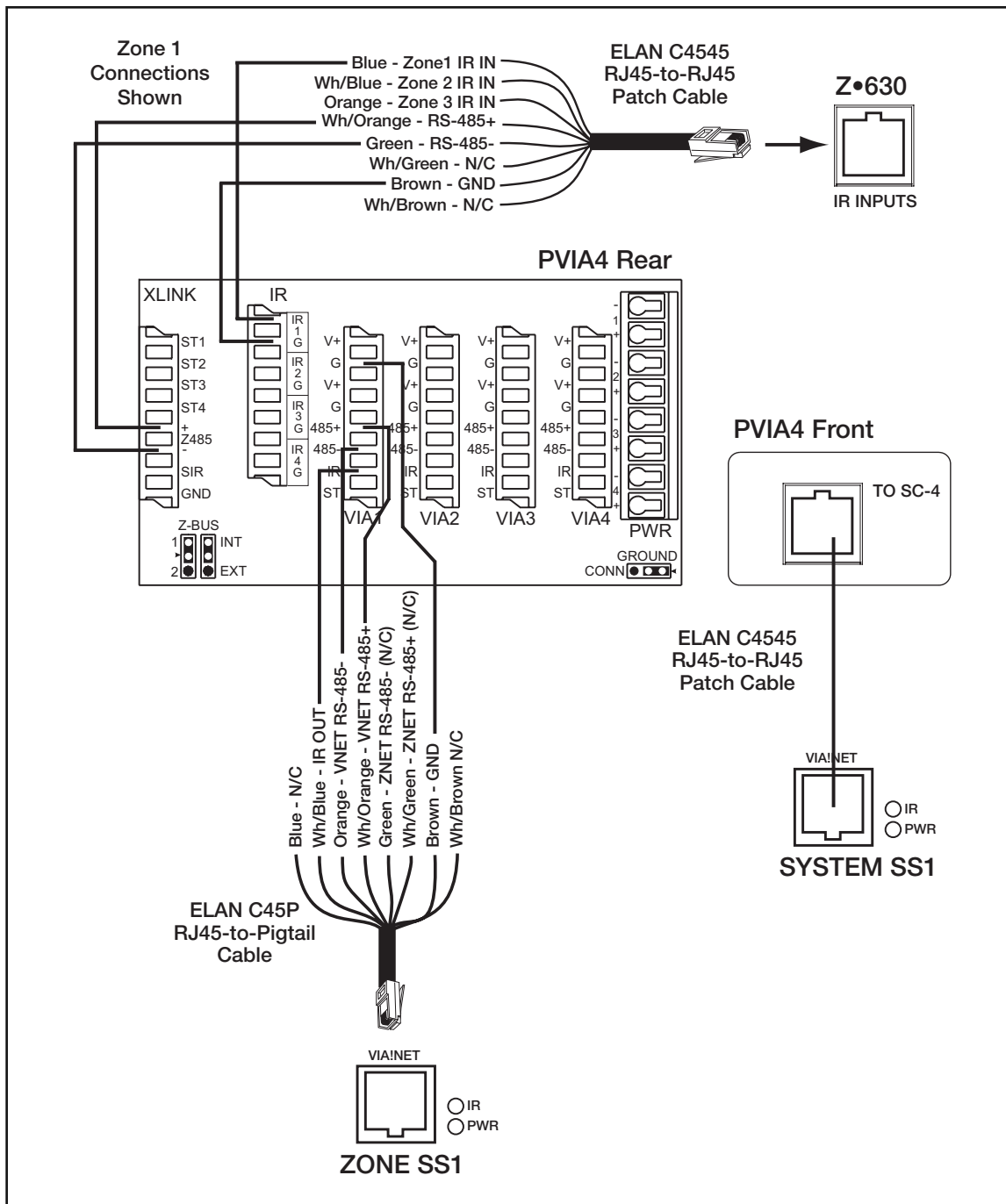


Figure 4.20 - VIA!NET/ZNET Connections-Z•630-No PSS1

System6 - VIA! NET to S6 & PVIA4 Connections

The drawing below shows advanced VIA!NET and ZNET connections required when connecting a ZONE SS1 System Station to an ELAN S6 Multi-Room Controller utilizing a SYSTEM SS1. Note that both VIA! NET and Z NET connections are required.

NOTE: The use of a PSS1 Precision Panel is **HIGHLY RECOMMENDED!** Use of a PVIA4, PVIA10, or PS12 Precision Panel is required for this application.

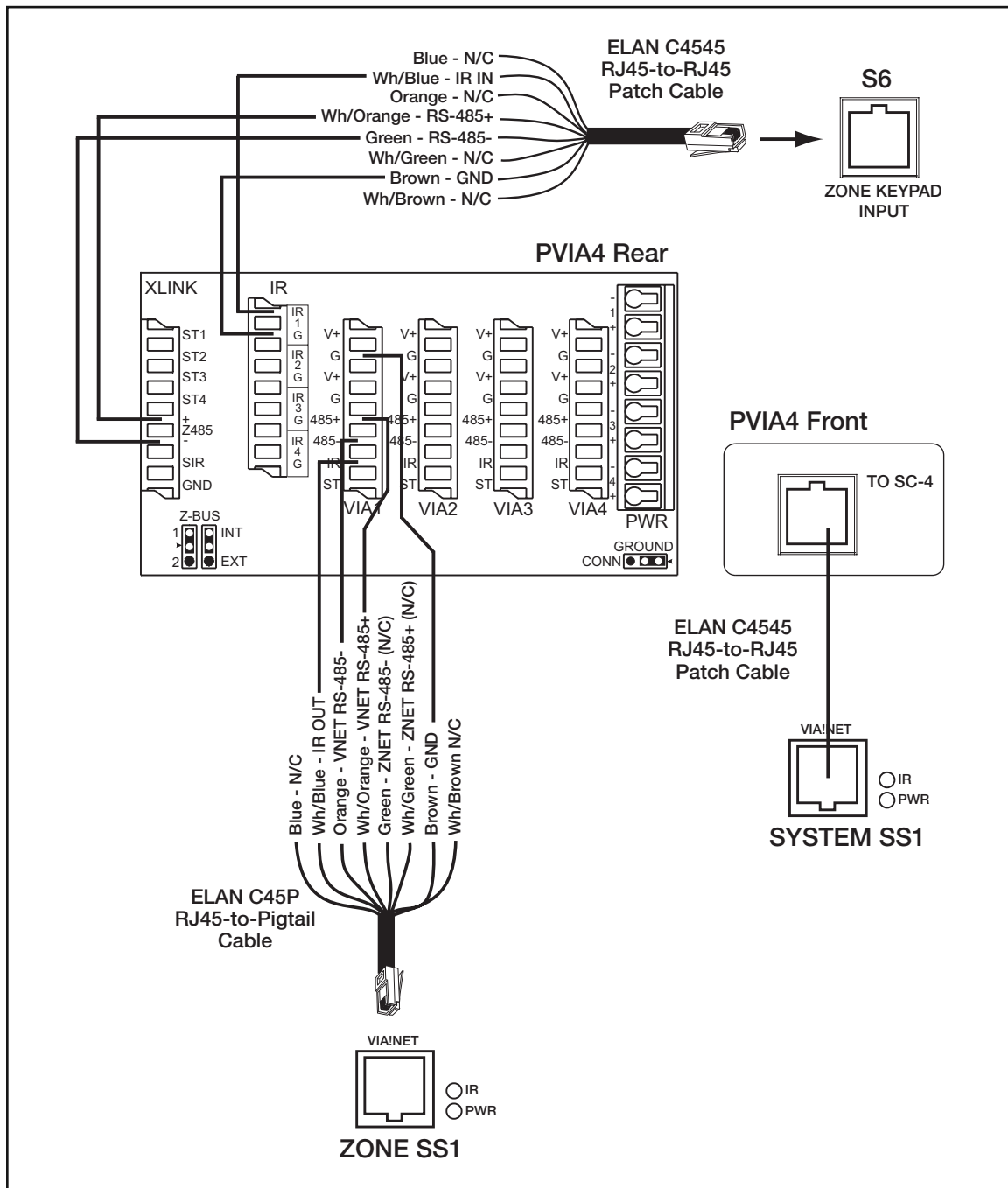


Figure 4.21 - VIA!NET/ZNET Connections-S6-No PSS1

System12 - VIA! NET to PS12 Connections

The drawing below shows advanced VIA!NET and ZNET connections required when connecting a ZONE SS1 System Station to an ELAN S12 Multi-Room Controller utilizing a SYSTEM SS1. Note that both VIA!NET and ZNET connections are required.

NOTE: The use of a PSS1 is **HIGHLY RECOMMENDED!** Use of a PS12 Precision Panel is required for this application.

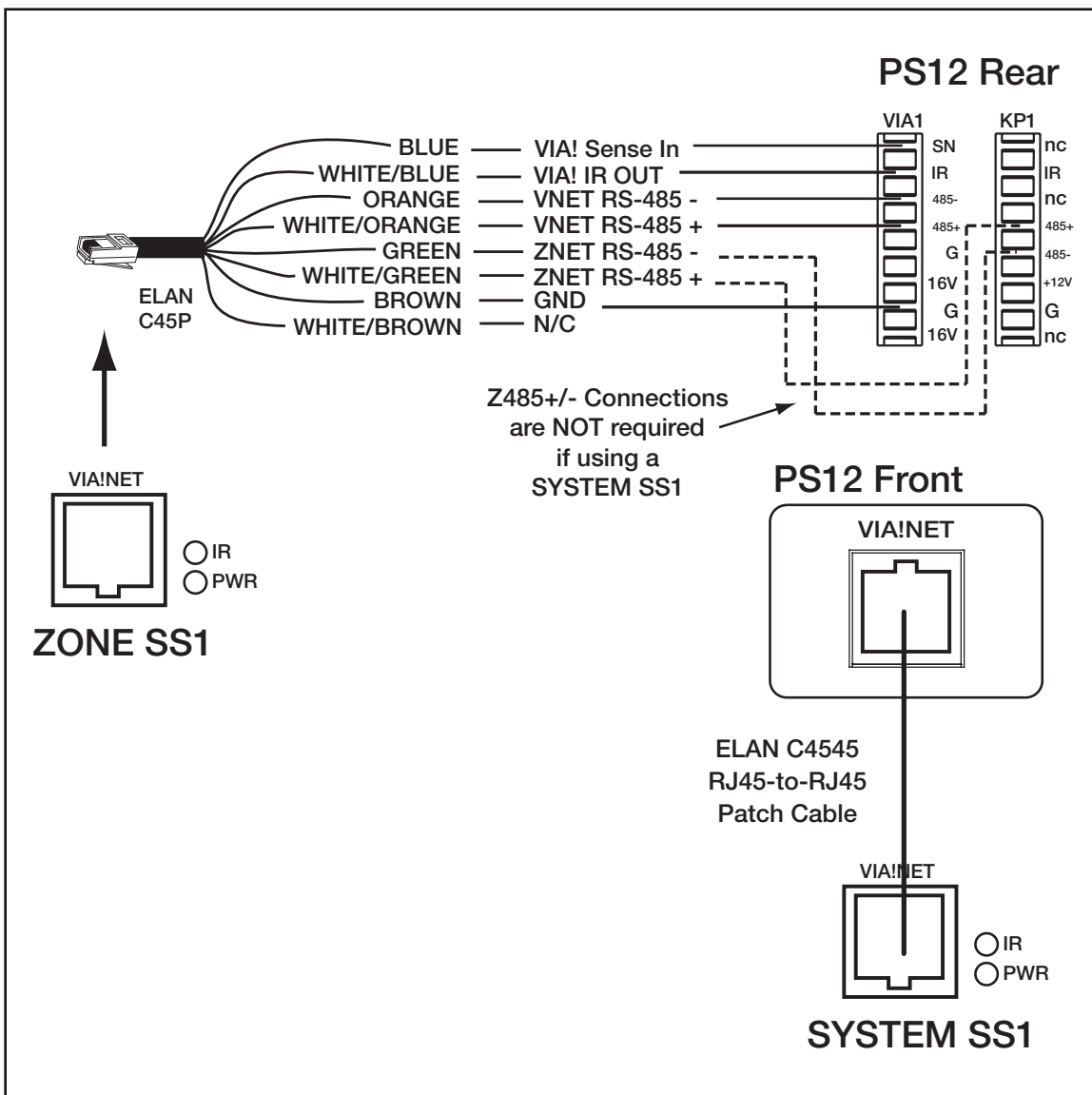


Figure 4.22 - VIA!NET/ZNET Connections-S12-No PSS1

IR Outputs

The programmable IR Outputs are typically used to control Audio/Video sources using IR. Connect single or dual IR emitters from the SS1 System Station to the devices to be controlled. Make sure to pay close attention to which ports are connected to which sources for IR routing purposes. There are twelve source-specific IR ports on each SS1 System Station.

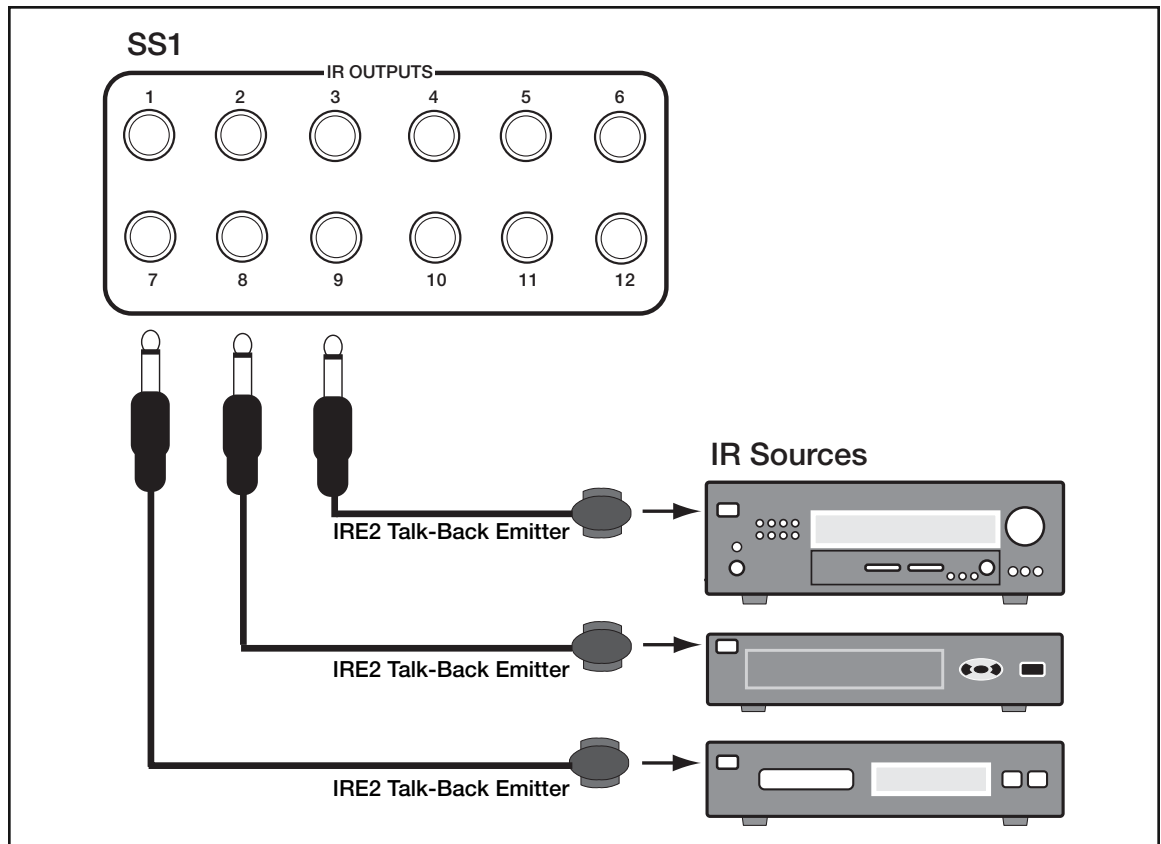


Figure 4.23 - IR Output Connections-No PSS1

ALL IR Output

Any IR signal sent into the SS1 will come out the ALL port. Use this for non-identical IR sources and for sources that need to be controlled regardless of what source is actually selected (A/V receiver or TV, for example).

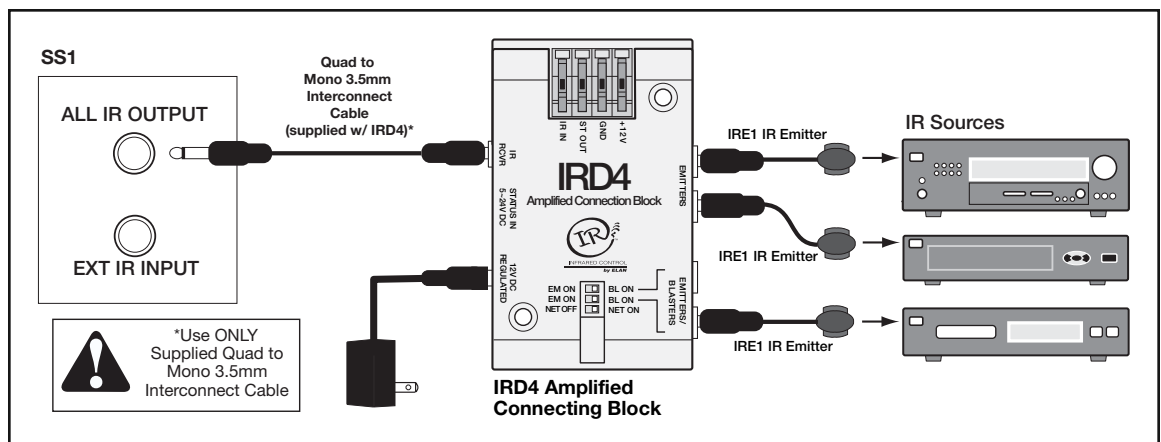


Figure 4.24 - IR Output Connections-No PSS1

EXT IR Input

IR signals can be sent from a location that is not part of a zone to control system sources. Connect IR and GND wires as shown. An external power supply must be used to power an IR receiver or keypad assigned to this function.

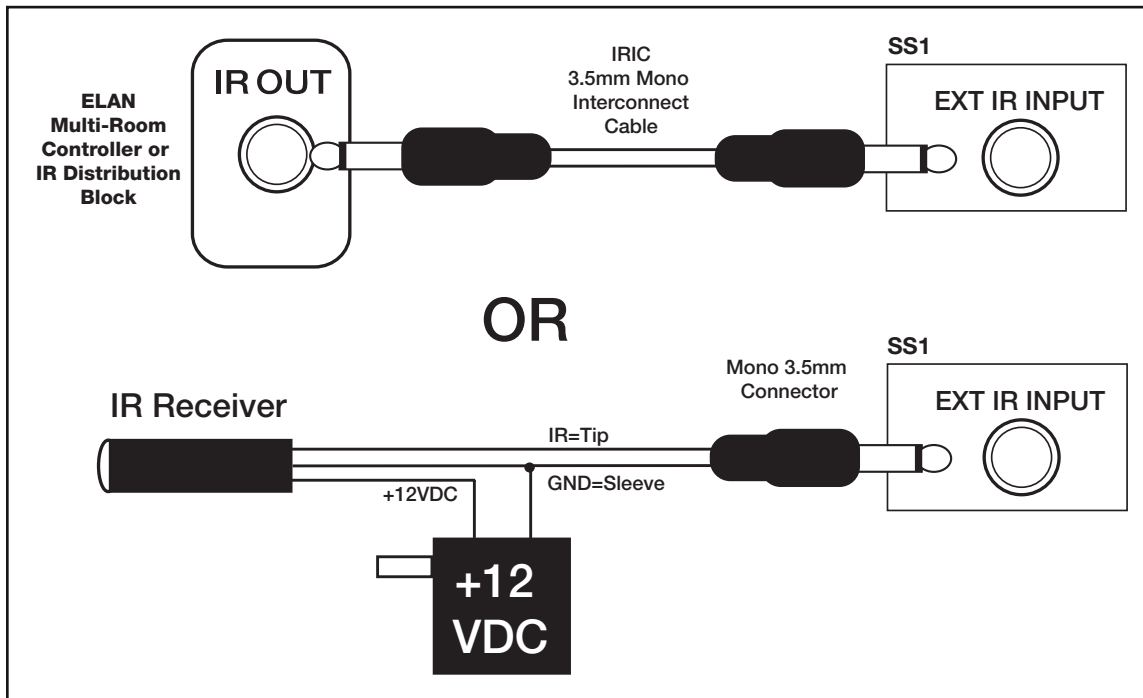


Figure 4.25 - EXT IR Input Connections-No PSS1

Sense Inputs

Plug in ELANSENSE sensors to created automated events based on triggers.

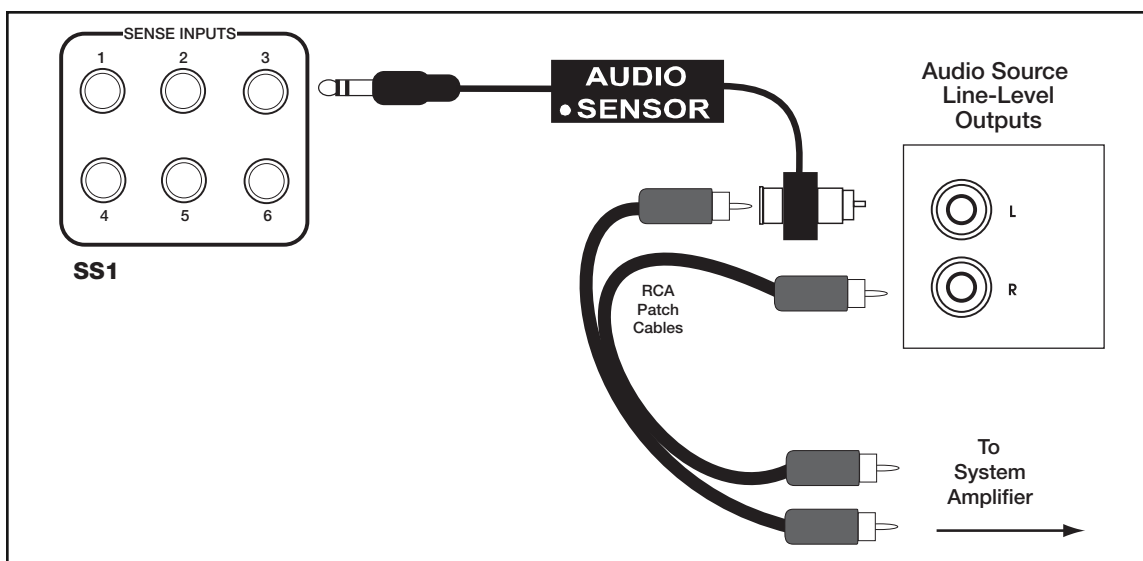


Figure 4.26 - Sense Input Connections-No PSS1

Ethernet Port

Use the Ethernet Port to connect a STAND-ALONE or ZONE SS1 to a router to facilitate communications with a VIA!2-8.4 Wireless Touch Panel. Use TIA568-A wiring standard for this connection. Do not use ELAN standard pinout!

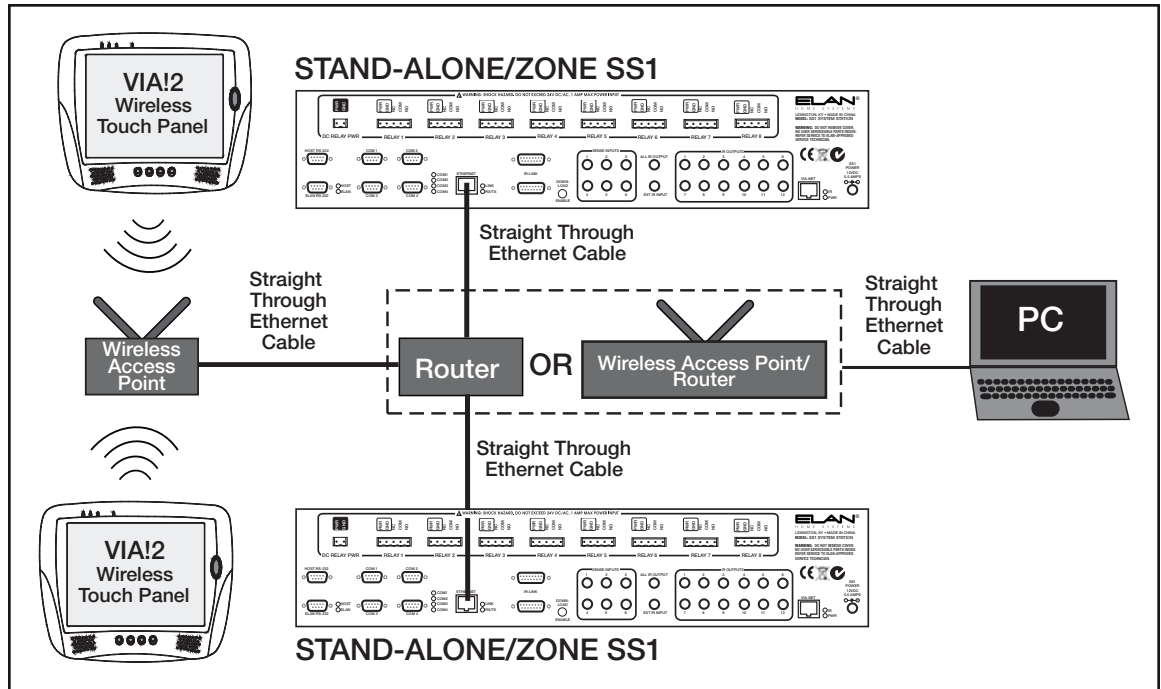


Figure 4.27 - Ethernet Connections-No PSS1

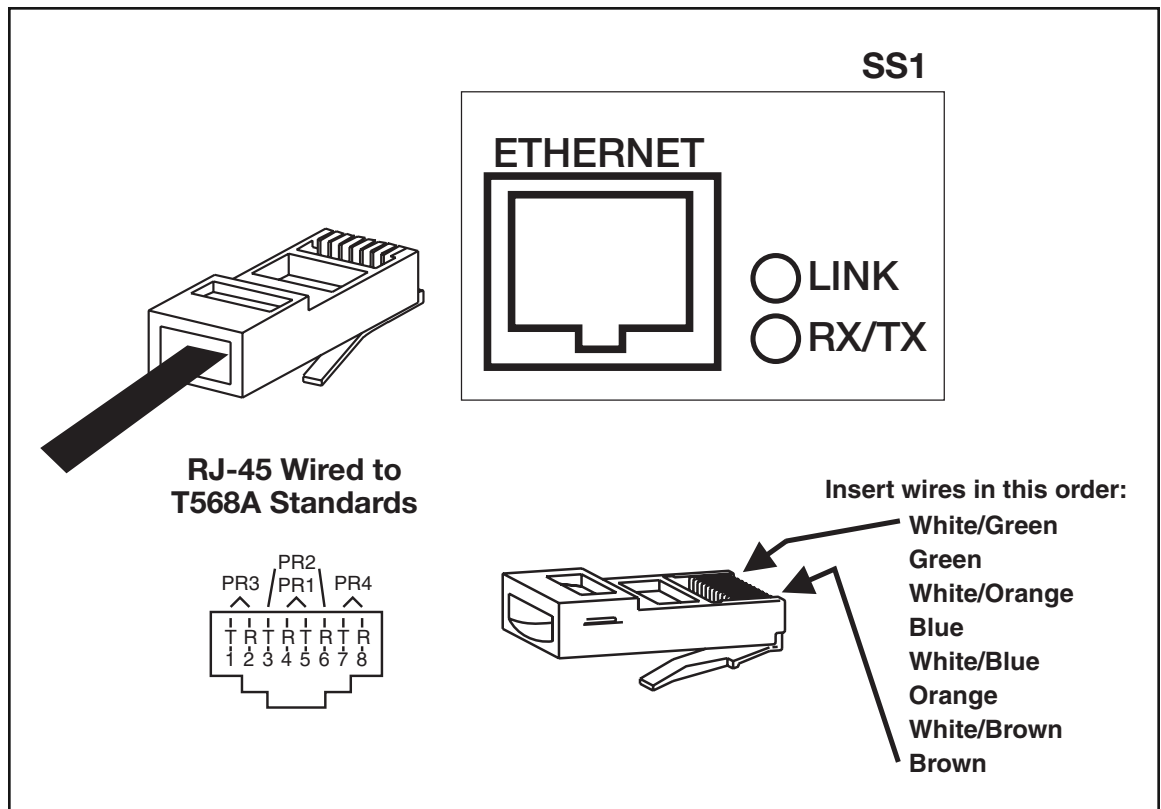


Figure 4.28 - Ethernet Pinout

Ethernet Port/Router Connections

Connect the SS1 to a Router as shown below using straight-through Ethernet cables. Specify a Wireless Access Point (WAP) with a separate Router, or a WAP/Router combination.

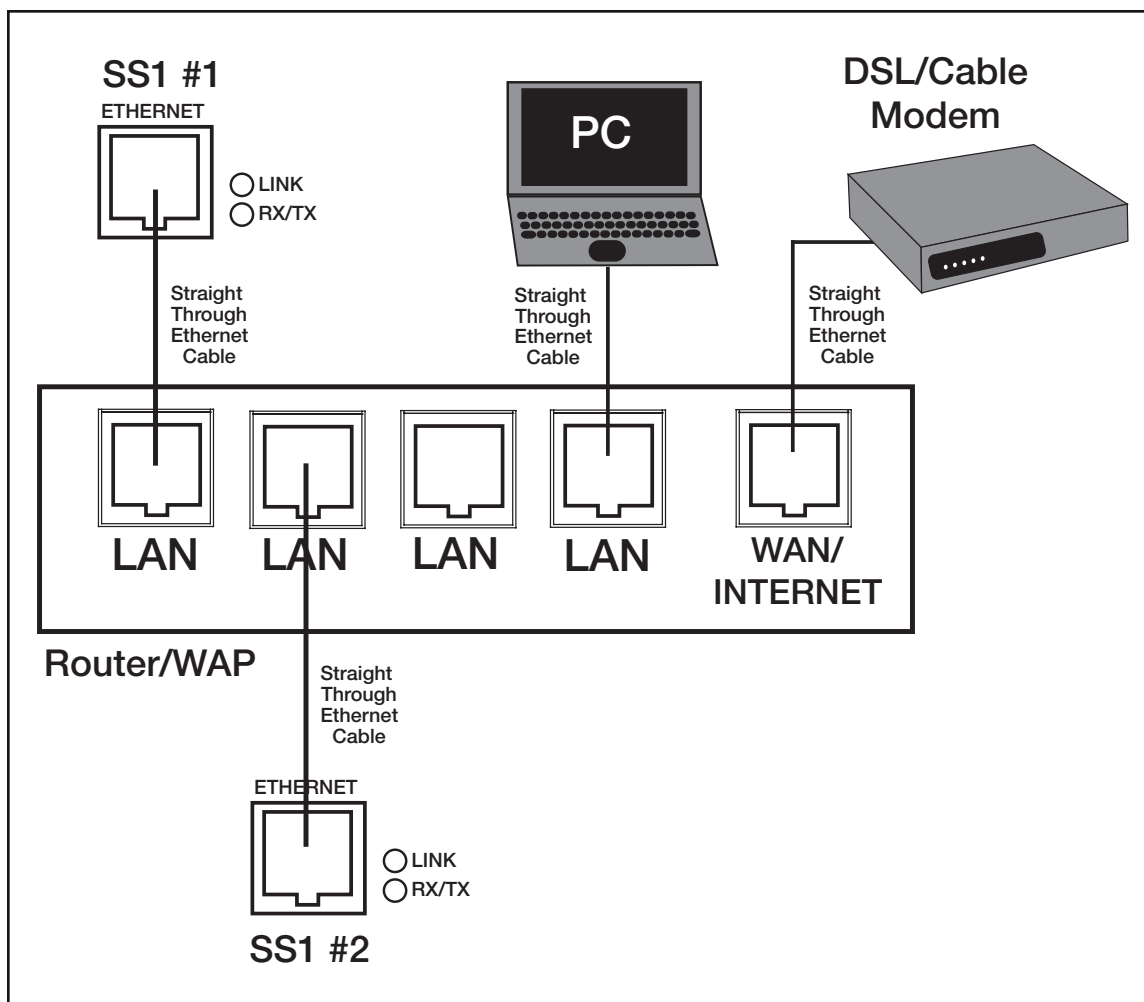


Figure 4.29 - Ethernet Port/Router Connections

COM 1-4

The COM 1-4 ports are designed to control external RS-232 devices such as Lighting, HVAC, and Security systems. Connect DB-9 serial cables or Cat-5 with DB-9 connectors between the VIA2-SS1 and the device to be controlled, as shown in **Figure 4.30**. Consult **Figure 4.31** for pinout positions.

NOTE: COM1 and COM2 have male pins. COM3 and COM4 have female pins. It is necessary to use a null modem gender changer if the RX/TX are reversed on a particular product.

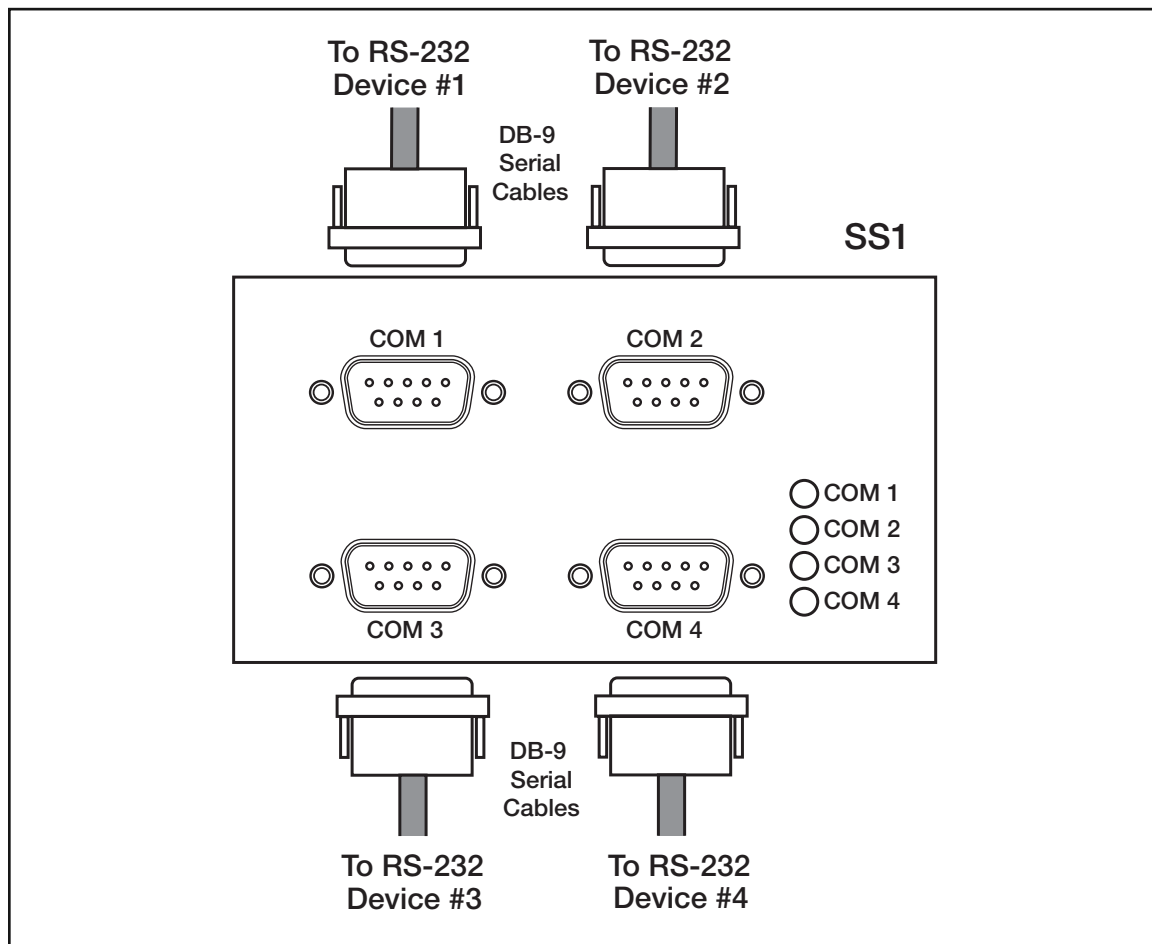


Figure 4.30 - COM Port Connections

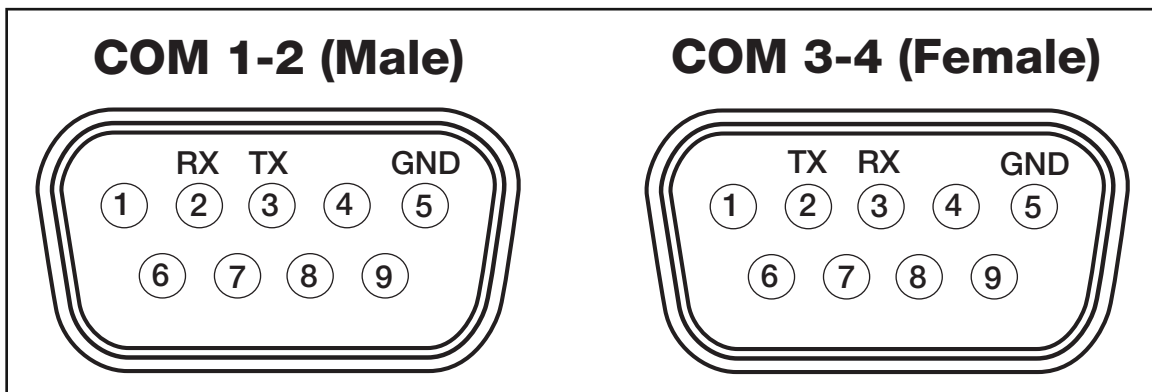


Figure 4.31 - COM Port Connections

Connections Regardless of the Use of a PSS1 Precision Panel

IR Link

Connect the IR LINK Port to a System12 Multi-Room A/V Controller (or other IR LINK-enabled ELAN Controller) or an additional SS1. Use the included DB-15 cable, paying close attention to the male/female pin orientation.

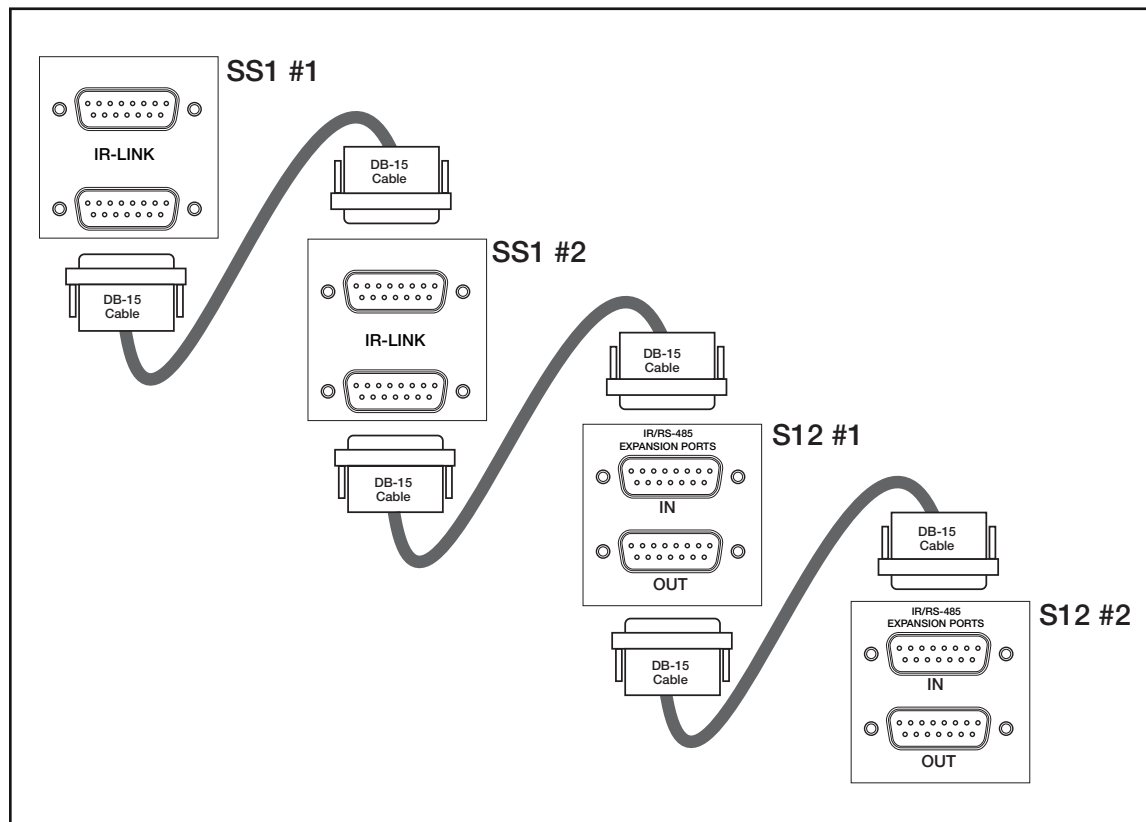


Figure 4.32 - IR LINK

DC Relay Power

DC Relay Power is independent of the PSS1 and connects directly to the SS1 System Station as shown in **Figure 4.33**. Connect a power supply of the required specifications for the installed relay device(s) to the DC Relay Power port. This power supply may be 0 to 30 Volts AC or DC, and up to 1 Amp.

NOTE: DC Relay Power connections are identical whether or not a PSS1 is being utilized.

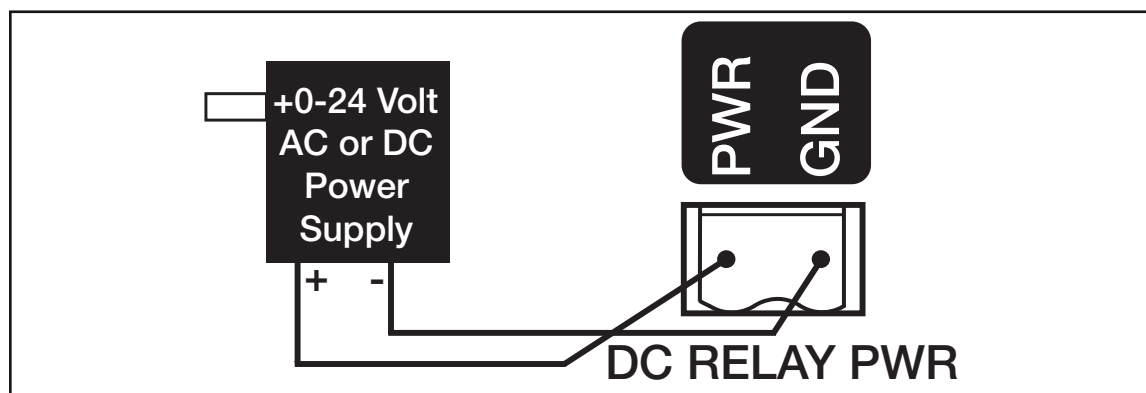


Figure 4.33 - DC Relay Power

SS1 Power

Connect the included 12VDC power supply to the SS1 POWER port after all connections are made.

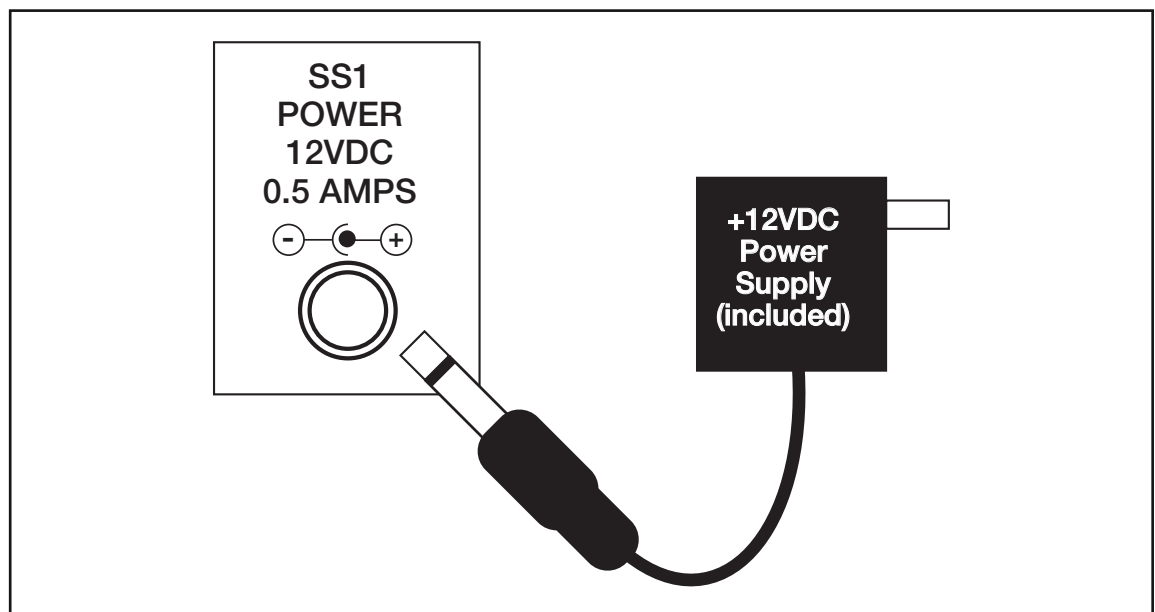


Figure 4.34 - SS1 Power

5. Programming

Once all connections have been made, system programming can commence. Use ELAN's VIA!®TOOLS setup software version 7.3 or higher for this purpose. For specific, detailed instructions, please consult the VIA!TOOLS HELP file.

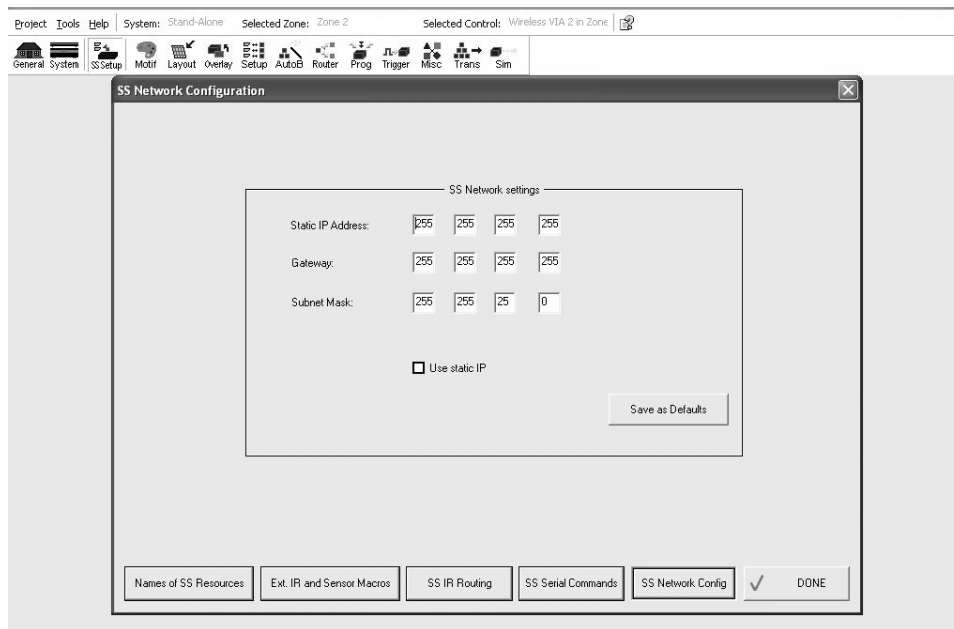


Figure 5.1 - VIA!TOOLS Programming

Setup Procedures

The SS1 System Station must receive a download from VIA!TOOLS in order to function correctly. ELAN strongly recommends using DHCP to allow the Router to automatically assign parameters to the SS1 System Station.

To configure the system:

1. Ensure that the most current version of VIA!TOOLS is installed on a computer that is connected to the network containing the SS1 System Station. *A dedicated network is strongly recommended.*
2. Remove power from the SS1 System Station and the system's Router.
3. Connect the SS1 System Station's ETHERNET port to the Router using an Ethernet cable.
4. Power up both the Router and the SS1 System Station. The Router should automatically assign an IP address to the SS1 System Station.
5. Once the steps above have been completed, open VIA!TOOLS (ver. 7.3 or higher) and perform the procedures required to program the system. For specific, detailed instructions, please consult the VIA!TOOLS HELP file.

Download Procedures

After the Setup Procedures have been completed, perform the following steps:

1. Open the VIA!TOOLS project created for the installation.
2. Press the DOWNLOAD ENABLE Button on the SS1 System Station (**Figure 5.3**).
3. Navigate to the TRANSFER page.
4. Click the button labelled "Transfer to SS and/or VIA-2 panel" (**Figure 5.2**).
5. The download will commence.

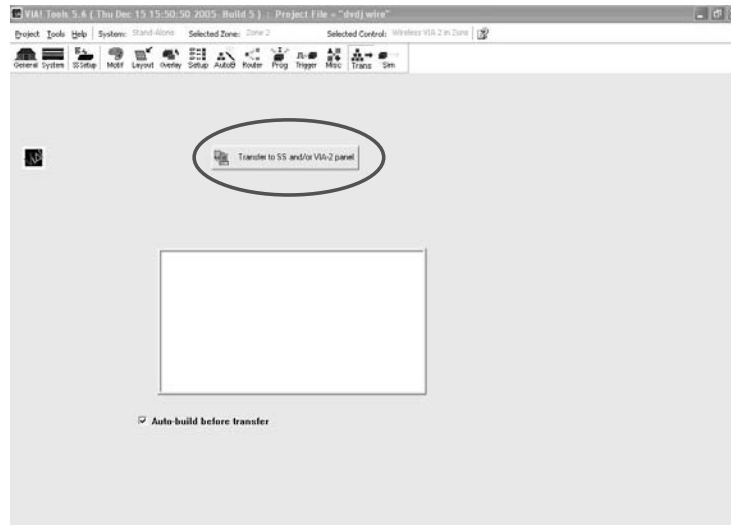


Figure 5.2 - VIA!TOOLS Download

Download Enable Button

The DOWNLOAD ENABLE Button has three functions:

1. **Enable Download** - Press the DOWNLOAD ENABLE Button prior to downloading a VIA!TOOLS project to the SS1 System Station. This action enables the SS1 to accept a download for up to one hour.
2. **Identify Unit** - Pressing the DOWNLOAD ENABLE Button during download will identify in VIA!TOOLS which unit is currently being downloaded to in the event that multiple SS1s are being utilized.
3. **Reset Unit**
 1. Remove the power cable.
 2. Press and hold the DOWNLOAD ENABLE Button.
 3. Replace the power cable with the button still depressed and hold for 30 seconds. This will reset all parameters and force the SS1 into DHCP mode.

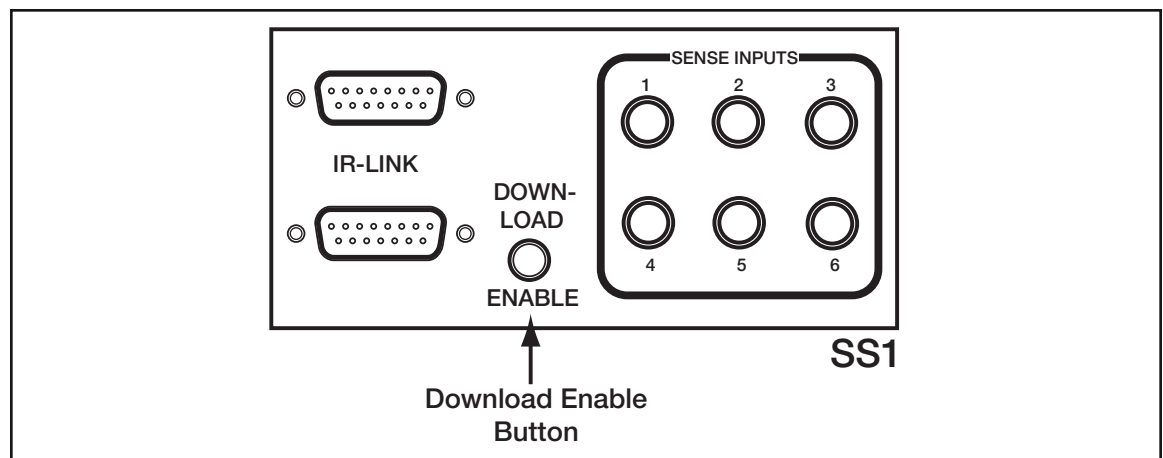


Figure 5.3 - Download Enable Button

SS1 System Station Diagnostics

The HOST/ELAN LEDs and the LINK/RX/TX LEDs provide diagnostic information when blinking in particular patterns. **Figure 5.4** identifies these patterns and provides solutions to issues related to Ethernet communication, download status, and firmware.


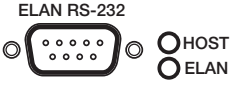

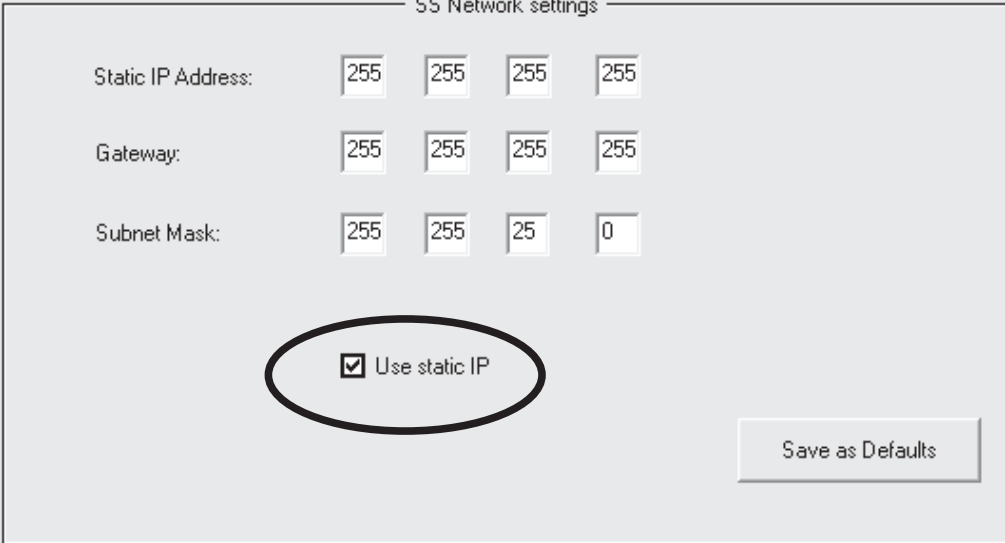
Symptom	Cause	Solution
LINK/ETHERNET LEDs flash On & Off simultaneously. 	SS1 can not successfully obtain DHCP address.	Verify and correct wiring. Perform RESET procedure. Verify and correct IP settings in VIA!TOOLS.
HOST LED flashes five times. 	Checksums invalid. Unit has not been downloaded to or has not been successfully downloaded to.	Download or re-download VIA!TOOLS project.
HOST LED flashes three times. 	SS1 firmware is corrupt	Call ELAN Tech Support.

Figure 5.4 - Diagnostics

Reboot

The SS1 System Station will automatically reboot itself when either of two events take place:

1. The **"Use static IP address"** box on the SS SETUP page of VIA!TOOLS is checked or is unchecked.



SS Network settings

Static IP Address: 255 255 255 255

Gateway: 255 255 255 255

Subnet Mask: 255 255 25 0

☒ Use static IP

Save as Defaults

Figure 5.5 - "Use Static IP Address" Box

2. The unit receives new SS1 System Station firmware. Firmware is updated automatically from VIA!TOOLS any time that the firmware residing in the SS1 System Station is older than that contained within the VIA!TOOLS version being used to program the system.

6. Troubleshooting

IR Control

Symptom	Cause	Solution
No source control from source-specific IR port. Works from "ALL" port.	Programming: missing or incorrect IR command.	Verify and correct programming.
No source control whatsoever.	1. Programming: missing or incorrect source control commands.	Verify and correct programming. Test IR commands from VIA!TOOLS.
	2. Wiring: IR emitter connected to wrong port.	Correct connection of IR emitter.
	3. IR emitter defective.	Replace IR emitter.
Intermittent source control.	IR flooding.	Check IR indicator LED. If it flickers, or is constantly lit, IR flooding is indicated. Check any IR receivers that may be receiving ambient light or plasma TV noise.

RS-232 Control

Symptom	Cause	Solution
No RS-232 device control.	1. Programming: missing or incorrect device control commands.	Verify and correct programming.
	2. Wiring: incorrect pin-out or serial port assignment.	Verify and correct wiring and/or port assignment.

Relays

Symptom	Cause	Solution
No relay functionality.	1. Wiring: Relays incorrectly connected.	Verify and correct wiring.
	2. Incorrect power supply.	Verify and correct power supply.
	3. Programming: relays incorrectly programmed.	Verify and correct programming.

VIA!NET

Symptom	Cause	Solution
Unable to control devices connected to SYSTEM SS1.	1. Wiring: VIA!NET wiring between ZONE SS1 and SYSTEM SS1 is incorrect	Verify and correct wiring.
	2. Programming	Verify and correct programming. See VIA!TOOLS Help file.

Sense Inputs

Symptom	Cause	Solution
Triggered Event fails to occur or Conditional Statements fail to operate correctly.	1. Wiring: Sense Inputs incorrectly connected or incorrect type of sensor/faulty sensor.	a. Connect a 3.5 mm mono mini cable to Sense Input. This simulates a contact closure and should trigger the event.
		b. Replace sensor or use different type.
	2. Programming: Sense Inputs incorrectly programmed in VIA!TOOLS.	Verify and correct programming. See VIA!TOOLS Help file.
Trigger event intermittent.	Sensor is incorrectly adjusted.	Adjust sensitivity of sensor.

Ethernet

Symptom	Cause	Solution
Unable to download VIA!TOOLS file to SS1.	1. Wiring: Ethernet wiring incorrect or Ethernet RJ-45 disconnected.	Verify and correct wiring.
	2. SS1 not ready to connect.	Press DOWNLOAD ENABLE button.
	3. Incorrect SS1 IP address.	Verify IP settings in VIA!TOOLS.
ETHERNET light flashes on SS1.	1. Wiring: Ethernet wiring incorrect or Ethernet RJ-45 disconnected. Ensure that a proper Ethernet cable is used.	Verify and correct wiring.
	2. Router is locked-up.	Reset/re-boot router then reset/re-boot SS1 by disconnecting then re-connecting power supply.
VIA!2-8.4 is not communicating with ZONE or STAND-ALONE SS1. "Searching..." or "Config Mismatch" displayed on VIA!2-8.4 Wireless Touch Panel.	1. Router is locked-up.	Reset/re-boot router then reset/re-boot SS1 by disconnecting then re-connecting power supply.
	1. SS1 has not successfully obtained an IP address.	Reset/re-boot SS1 by disconnecting then reconnecting power supply.
	3. Router security settings incorrect (WEP/WPA).	Verify IP settings in VIA!TOOLS.

Notes:



Limited Warranty

ELAN HOME SYSTEMS L.L.C. ("ELAN") warrants the SS1 System Station to be free from defects in materials and workmanship for the period of two years (2 years) from date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the item at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an ELAN authorized installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To ensure that consumers obtain quality pre-sale and after-sale support and service, ELAN Home Systems products are sold exclusively through authorized dealers. **ELAN products are not sold online.** The warranties on ELAN products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your ELAN reseller is authorized, please call ELAN Home Systems at (859) 269-7760.

The logo for ELAN Home Systems, featuring the word "ELAN" in a bold, stylized, sans-serif font. The letters are black and have a modern, geometric feel. A registered trademark symbol (®) is located to the upper right of the letter "N".

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